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ABSTRACT

The material in this secondary teacher's manual, Economics: Choice Making, the second of three sequential units in Course I, provides a foundation upon which subsequent courses will build. Objectives are for students to grasp economic principles which serve as fundamental tools needed to analyze basic facts and institutions of modern economic life. Focus is upon the basic economic problem: In all nations a scarcity of resources along with expanding needs and desires exists; therefore, society must make choices that are influenced by culture, government, and individual self-interest resulting in the various economic systems. Techniques involve students in gathering, organizing, and classifying data, in making inferences, posing hypothesis, and ultimately formulating generalizations. Four sections are presented in the 12-week unit, with a student manual being incorporated into each section of the guide. Human Material Wants and the Economy is studied in section one which deals with family, city, and national consumption expenditures, differing and changing human wants and economic goods. Sections two, three, and four are concerned with economic resources--natural, human, and capital. Related documents are: ED 048 062, SO 003 169 through SO 003 175. (Author/SJM)

ECONOMICS: CHOICE MAKING

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Social Studies I

ECONOMICS: CHOICE MAKING

TEACHER'S MANUAL

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1968

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PREFACE

The Social Science Curriculum Study Center at University High School, University of Illinois, Urbana, has as its objective the development of the first three courses in a sequential junior-senior high school social studies program. These three basic courses for the secondary school social studies are a part of a five-year sequence designed to contribute to a program of study that introduces students to: (1) the structure of man's social order and how individuals in our own and in other cultures interact with the social order, indeed, both shape and respond to it; (2) the dynamic nature of cultures; and (3) the diversity of cultures.

The development of the three sequential social studies courses begins, first, with the identification and selection of concepts and generalizations essential to understanding man's relationships with his social, economic, and political institutions at different periods in time in our own culture and in other selected western and non-western cultures. In developing the new course materials, priority is given to achieving maximum student involvement in inquiring, hypothesizing, testing, interpreting, and ultimately in valuing social data to the end that students arrive inductively at the concepts and generalizations and develop skill in analysis.

The procedure followed in the development of each of the three courses involves these five stages:

1. Identification of concepts, generalizations, skills of social analysis by the project staff in cooperation with academic specialists in art, cultural anthropology, economics, geography, history, political science, regional area studies, sociology, psychology, and teacher education.

2. Preparation of the new course materials and evaluation instruments which are then tried out in the social studies classes at the University of Illinois High School, University of Illinois Curriculum Laboratory.

3. Revision of the new materials and preparation of a Teacher's Manual with tryout in a small number of public schools whose teachers have benefit of consultant help by the project staff including orientation to the new materials in summer institutes and conferences during the school year.

4. Second revision of the new materials and tryout in a larger number of cooperating public schools with continued teaching and revision at the University of Illinois High School.

5. Further analysis of selected data from trial in the University of Illinois High School, and in cooperating public schools field testing the materials, and publication of the new course materials.

The material in this TEACHER'S MANUAL, ECONOMICS: CHOICE MAKING, is the second of three instructional units in the First Course to be followed by COMMUNITY POLITICAL PROCESSES.

Preface

The new instructional materials on ECONOMICS: CHOICE MAKING are
eing developed to help students arrive at a meaningful and functional understanding
f the persistent and universal human problem of choice making among alternative
nds as concerns our nation today and other selected nations. To this end under-
ying ideas about human groups give direction to the materials that have been
eveloped herein. A people's desire for food, shelter, transportation, health,
ducation, leisure, and many other things seem always to be greater than what can
e provided by the land, minerals, labor, machinery, and other resources avail-
ble for production. Since human material wants and service wants are virtually
nlimited and can be satisfied in different ways, and productive resources are limited
nd can be used differently, people everywhere find it necessary to manage and
'economize''--in the use of their limited resources in order to get as much as
ossible of the things they want. The basic economic problem of how limited
esources shall be used to satisfy human wants raises many questions that all
uman groups must somehow answer.

WHAT GOODS AND SERVICES SHALL BE PRODUCED AND IN WHAT AMOUNT?
HOW SHALL A NATION'S LABOR FORCE, LAND, SOURCES OF ENERGY, AND CAPITAL EQUIPMENT BE USED TO PRODUCE THE THINGS ITS PEOPLE WANT?
WHO SHALL GET THE GOODS AND SERVICES PRODUCED?
HOW CAN A NATION'S PEOPLE HAVE MORE OF THE MANY THINGS THEY WANT?

We can think of an economic system as a set of man-made arrangements for
rinding out day by day the necessary answers to the questions raised by a scarcity
f resources relative to human wants. Although all nations must develop some
et of arrangements to organize, guide, and coordinate the economic activities of
ts people so the necessary decisions can be made, no two nations organize economic
ctivity in exactly the same way. Nor do all nations place exclusive reliance on a
ingle method. The difference, then, is in the degree of emphasis that a nation's
eople give to each of three ways of organizing economic activity, namely, reliance
n custom, government, individual self interest. Herein we are concerned with
conomic and non-economic goals of a nation's people.

The materials in this Teacher's Manual and in the Student's Manual, have
een developed at the Social Science Curriculum Study Center, University High
School, University of Illinois Curriculum Laboratory, Urbana, Illinois, in coopera-
ion with Project Social Studies, U. S. Office of Education, Department of Health,
Education and Welfare. The consultation services of economists in the Department
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October 1968

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THE WORLD OF ECONOMICS:

CONSTRAINT AND SOCIAL INVENTION

Man has to work for a living. A world in which no one has to work, a world in which nature provides abundance without human effort, and a world in which man has more than enough for everything he wants--this is a paradise to dream about but it is not the real world in which we live or the world at anytime inhabited by homo sapiens. To be sure, the physical environment provides soil, water, minerals, air, sunlight, vegetation, and wildlife. But, unfortunately, nature does not furnish man with its fruits in such abundance that he can live without effort, toil, and inconvenience. Nature sets the stage but man, in cooperation with his fellow men, must manage the resources provided by nature to satisfy human wants.

In simple societies this meant fishing, hunting, harvesting, and sharing out the harvest among the members of the society. In modern times, the satisfaction of human wants involves man in innumerable complex processes of managing his resources. Working in coordinated groups, modern man draws resources from all parts of the globe and produces goods and services to sell all over the world to satisfy wants that he might not otherwise be able to satisfy at all or satisfy less well. Consider, if you will, the complex set of interrelationships and the interdependence of millions of people required to satisfy the wants of this British woolen-maker.

Basically, the economic problem is: how do men manage their search for material well-being? This all important problem taxes the social inventiveness of man challenging his ability to devise, establish, and coordinate the activities of millions of people spread over vast areas, unacquainted with each other, and lacking close family or other sentimental ties. In addition, countless conflicts of interest must be decided with a minimum of friction and violence. Since the ways that a people choose, develop, or accept as a means of using their resources to satisfy human wants is a social rather than an individual process, economics is concerned with social behavior. It shares with history, sociology, political science, anthropology, and social psychology the study of the behavior of men in groups. It borrows from these studies, contributes to them, supplements them, and often overlaps them.[1]

The instructional materials in this twelve week unit of the Foundation Course have been developed to teach selected durable and universal concepts to equip students with the "tools" essential to understanding how man in his own culture and time and in other cultures, place, and time solves the challenge of provisioning for the group. Concepts and understandings introduced in this unit provide the foundation on which additional concepts, understandings, and relationships are introduced and developed in the subsequent Courses II, III, U. S. History, and the terminal twelfth grade Economics course. Each of the successive courses requires of the student that he apply and use in new and different cultural settings the concepts and understandings introduced in the Foundation Course. In other words, the concepts become operative contributing to developing skill in analyzing and understanding current economic issues.

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[1] Lester V. Chandler. *A Preface to Economics* (New York: Harper and Brothers, 1947).

CHOICE MAKING AND ECONOMIC SYSTEMS

All nations are confronted with the fact of SCARCITY since human material wants are unlimited and economic resources are limited.

When we refer to individual human wants we mean such goods and services as houses, electrical appliances, food, clothing, automobiles, a hair cut, tonsilectomy, and legal advice. Individual human wants for goods and services actually have a high reproduction rate. As we fulfill our desire for some of our wants, new ones appear stimulated by our biological needs, the particular social environment in which we live, as well as by the development of new products by industry and advertising.

As a nation, too, we have expanding wants for goods and services as is illustrated currently by the urgency of our desire to improve and extend educational services to more of our people; to redevelop and restore urban areas; to develop rapid transit systems in our metropolitan areas; to develop recreation areas; to make available more hospitals, clinics, and nursing homes to provide improved medical and health services to more of our citizens; and for national defense adequate to protect our way of life.

These individual and national wants can be satisfied only by combining and using our nation's scarce and limited resources. A nation's resources may be classified as natural (soils, minerals, timber, water); human (labor force and entrepreneurial ability); and man-made resources (tools, machines, factory buildings, stores, warehouses, transportation, communication, and power facilities) that are the means by which we produce the goods and services to satisfy our individual and national wants.

Nations differ in the quantity and quality of their natural and human resources and capital equipment, but no nation possesses unlimited resources. Our nation's shortage of man power during World War II illustrates how labor used to man the armed forces could not be used to produce many of the goods and services wanted by civilians. Tools, capital funds, and machines used to produce military equipment could not be used to make automobiles in the quantity wanted. Even a nation like the United States that is generously endowed with natural and human resources does not have unlimited resources to satisfy all the insatiable demands its citizens make on the economy for goods and services.

A second characteristic of resources is that they can be used in different ways. Land can be used to raise soya beans, corn, wheat, forage crops to feed cattle, for a factory site, a housing development, highway or a national park. Steel can be used to make automobiles, household appliances, tools and machines, jets and missiles. Skilled labor can be used to build schools, factories, highways, houses, or military hardware.

The fact that our own or any nation is confronted with expanding wants of citizens and limited resources that can be used in different ways to satisfy wants creates a condition of SCARCITY which in turn necessitates CHOICE--the basic economic problem. That is, when we as individuals or a nation cannot have everything we want we have to make choices. In the examples given above, land used for a national park cannot be used for a factory site. Steel used for household appliances is not available to produce tools and machines which in turn increase our capacity to produce goods and services in the future. Or, to state it in a different way we "can't have our cake and eat it, too." There is a price to be paid for the choice we make in the use of our scarce resources. The real cost principle or opportunity cost, as economists use the term, is the most desired other use of the resource that is given up. When we satisfy one want, that is, when we use resources (natural, human, capital equipment) to produce hoola hoops these same resources cannot be used to build machines to produce other goods. Resources used to build highways are not available to build, equip and staff new schools. The cost to us as individuals and a nation in this instance is technological development that would increase our capacity to produce goods in the future--a use we sacrifice since we've selected to use our resources for other purposes. Opportunity cost should help us to use scarce resources with greater competence and efficiency. When as individual consumers and citizen voters we make choices among our many desires for goods and services, we need to strive to make those choices that represent a more efficient use of our resources than the other possible uses that we must forego.

Economic Systems - The Big Economic Problems

Given the fact of SCARCITY, a nation needs to devise some way of deciding how its limited natural and human resources, and capital equipment shall be used to satisfy the wants of its citizens. The devices, practices, and ways a people develop over time and use to deal with SCARCITY are referred to as institutional arrangements or economic institutions which, in fact, comprise a nation's economic system. The function, then, of an economic system is to find answers to these questions: (1) What and how much to produce? Of the many things Americans want today--food, housing, schools, hospitals, nail polish, ball point pencils, books, and atomic-powered submarines--which of these shall we produce and in what amount? (2) How can we produce these goods and services most efficiently, that is, how can our limited resources be organized and used to get the kind and amount of goods desired? (3) How should output be distributed? Should output be distributed equally; on the basis of individual need; in terms of social status; on the basis of individual contribution to production; resource ownership, or how? An additional problem to be answered by an economic system is how to make maximum use of a nation's productive resources. That is, how can we achieve and maintain a full employment level of production thereby avoiding waste of unused resources?

All people and nations have been confronted with the need for developing an economic system to perform the jobs posed by these economic problems, namely, (1) what and how much to produce; (2) how to organize and use resources for production; (3) how to distribute output.

Economic Systems Are Not All Alike

Although the big economic problems are the same for all nations and people, the method used for organizing economic activity to deal with these problems need not nor is it the same. Over time man has resorted to (1) religion, custom and tradition; (2) centralized direction; and (3) reliance on individual striving for material gain.

Choice Making and Economic Systems

The traditional feudal society of the Middle Ages in which the Church was the major determiner of economic activity illustrates how the goals approved by the church with emphasis on the good life and spiritual values resulted in a self-contained, self-regulated system based on custom, tradition, and the estate system.

The Soviet Union illustrates the use of centralized direction and personalized control in organizing economic activity. In this type of economy, a small group at the head of government finally determines the overall goals for the economy. In the planning process, target goals are set for each industry and resources are allocated in the amounts needed to meet the production goals. The planning process also determines how output will be distributed. That is, how much shall be used to expand and replace capital goods and how much shall be consumed collectively.

The third type is that of decentralized direction or reliance on personal striving for material gain. Here no church, tradition, custom or central planning committee performs the jobs of an economic system. Instead, each individual with only market prices to guide individual action is free, within limits, to enter whatever occupation he chooses and to pursue those activities that permit him to maximize income and satisfaction.

In the United States we have developed a set of economic institutions which reflect the desire of Americans to maintain as much individual freedom as is possible and still achieve other desirable goals. One of these basic institutional arrangements is the institution of private property.

Natural resources such as petroleum, coal, natural gas; man-made instruments of production such as factories, machines, tools, homes, automobiles, household appliances, furniture, patents, copyrights, stocks and bonds are largely owned by individuals and subject to relatively few restrictions on the use of their property.

Closely related to the institution of private property is the idea of freedom of contract. In the United States, government provides a legal basis for the negotiation and enforcement of contracts among individuals and business firms. Freedom of contract means that individuals are relatively free to enter into agreements with other individuals, business firms, or government agencies involving their private property; to bind themselves, by means of legally enforceable contracts, to furnish, or to use, the services of individuals or their property.

Another important institutional feature of the American economy is that the nation's productive resources are owned, organized, and managed by private business firms. In the United States most production takes place as a result of private business firms binding together through contracts the services of workers and other economic resources. This is what people mean when they describe the American economy as a private enterprise economy.

In the United States, individual initiative and self interest are accepted as proper and desirable motives for economic behavior. Individuals are largely free to make a living in the occupation of their choice, to spend their money for the products and services they feel will give them the greatest enjoyment, to live where they choose, and to use their property and personal abilities to their own best advantage.

Choice Making and Economic Systems

Another basic institutional arrangement in the United States is the heavy reliance placed on an elaborate network of prices and markets to organize and guide the economic behavior of individuals. Markets may be large or small. Some markets are largely local in character such as the local labor market, others are regional, national, and international in scope. These markets are interrelated. A worker, may move from the Arkansas labor market to the Chicago labor market if he believes wages are higher in Chicago. This network of interrelated markets is the market system. In these markets the amount of products and services exchanged, and the prices at which they are sold may be established by the individual decisions of large numbers of small, independent buyers and sellers; they may be established or influenced by a few dominant buyers or sellers; or may be influenced by legislation or the regulatory activities of governmental agencies. The important thing is that individuals and business firms must adjust their own economic decisions in terms of the forces of the market, or in the light of their personal influence on the market.

Prices and markets are part of the economic system of all nations, but economic systems differ in the extent to which prices and markets are used as an instrument of economic organization, and in the extent to which they are subject to public or government control. In the United States, a system of prices and markets, substantially free from government control and influence, is relied upon as the central force in organizing the economic decisions of individuals. This is what we mean when we refer to the American economy as an impersonal and decentralized method of organizing economic activity. The American economy, then, reflects the values, economic and non-economic goals of our people, the skill with which we are able to use these resources, the understanding our people have of how our economic system operates and their willingness to apply this knowledge to the achievement of our economic and non-economic goals.

Similarly, the economic systems of other nations reflect their values, economic and non-economic goals. Nevertheless there are similarities as well as differences. In the case of the American, British, Swedish and Soviet economies today, all four systems use a system of prices and markets to coordinate economic activity. There is a substantial degree of freedom of occupational and consumer choice and all rely on economic incentives to stimulate workers and managers. They differ most sharply in the extent and use of private property, and in the extent of governmental influence over the organization and use of human and non-human resources.

Despite these similarities, these four nations represent different approaches to the problem of economic organization. In the United States there is little conscious government planning of production and resource use. Prices and markets are relatively free of governmental influence. In Sweden and Britain limited nationalization of industry and some efforts at detailed planning result in somewhat greater governmental influence over the market. In the Soviet Union, planning is carried out in great detail, and the mechanism of the market is used as one of the tools in helping achieve the planned goals of the economy. It does not determine as the market system does in the American economy and to a lesser extent in Britain and Sweden, what and how much to produce, how to organize and use resources for production and how to distribute output. The differences, then, are not to be found primarily in the institutional arrangement, although important differences do exist, but mainly in the way in which the institutional arrangements operate in each economy to provide answers to the basic questions arising from the fact of scarcity.

ECONOMICS: CHOICE MAKING

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ECONOMICS: CHOICE MAKING

Basic Understandings

HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS

At Any Point In Time People Have Innumerable Unfilled Material Wants Many of Which Derive From Biological Roots.

The Particular Kind of Good and/or Service an Individual or Society Wants is Strongly Influenced by the Culture.

Most Human Material Wants Are Not "Once for All Wants" Hence They Require a Continuous Flow of Particular Economic Goods and Services to Satisfy Some Want. The Larger the Flow of Goods and Services the Higher the Degree a Given Want is Satisfied.

To Obtain Maximum Satisfaction, Individuals and a Society Need to Balance Anticipated Satisfaction and the Cost (Time, Leisure, Money, Energy Output) of Satisfying Particular Wants.

Wants are Dynamic--Changing Continuously and Reflecting Changes in the Tastes, Preferences, Goals and Values of Individuals and a Society as Well as the Productive Capacity of the Economy.

ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT

Natural Resources are Limited and Can Be Used in Different Ways.

Natural resources are limited relative to the demands made on them for: (1) working space; (2) materials used in the production of goods and services; (3) energy derived from coal, petroleum, natural gas, water power, and uranium to supplement man's physical effort.

Natural resources are of two kinds: renewable and exhaustible.

Discovery, state of technology, human wants determine whether or not a natural resource is an economic resource.

Man is the agent of change determining how and to what extent limited natural resources can be used, renewed, supplemented and/or substituted.

Human Resources are Limited and Can Be Used Differently.

Human resources include labor that contributes to the production of goods and services, and enterprise (management) that supplies the initiative, leadership, and risk-taking involved in "taking charge" of the production of goods and services.

Human resources are limited relative to the demands made on them to produce goods and services.

Human resources can be used differently in the production of goods and services.

The quantity of labor available to an economy is not fixed. It depends on the size of population and the percentage of population in the labor force at a given time.

The quality of a nation's human resources is determined by the length and kind of education and vocational preparation, health, ability and willingness to adjust to change.

Capital Equipment or Man-Made Resources are Limited and Can Be Used Differently.

Capital equipment is derived from natural and human resources.

Capital equipment includes those products of labor and natural resources employed in production, i.e., factories, mines, machines, tools, transportation and communication facilities, stores, warehouses, docks and harbor installations.

The quantity and quality of capital equipment are factors that influence the productivity of labor.

Capital equipment in modern industry requires a large percentage of the Gross National Product.

Capital equipment requires the sacrifice or postponement of current consumption to increase output in the future under conditions of full employment.

Economic Resources Do Not Combine Themselves--They Need to Be Combined, Arranged, and Organized in Accordance With Basic Economic Principles to Obtain the Greatest Productivity.

Resources are Not Perfect Substitutes for One Another.

WANTS RELATIVE TO PRODUCTIVE ECONOMIC RESOURCES GIVE RISE TO THE ECONOMIZING PROBLEM OF SCARCITY

Mere Fewness Is Not the Same Thing as Economic Scarcity. Goods and Services Have to Be Wanted or Demanded. Economic Scarcity Involves Two Conditions, Namely, Supply and Demand.

The supply side of economic scarcity: some obstacle prevents the procurement of unlimited quantities of a particular good or service.

The demand side of economic scarcity: more of a particular good or service is wanted than can be obtained without effort.

Economic Scarcity Is a Primary Characteristic of Our Own and All Existing Societies.

ECONOMIC SCARCITY REQUIRES CHOICE MAKING OR ALLOCATING PRODUCTIVE RESOURCES AMONG ALTERNATIVE ENDS

All Societies Must Determine:

What goods and services shall be produced and in what amount;

How productive resources shall be allocated and organized for production,

For whom goods and services should be produced.

SOCIETIES ORGANIZE ECONOMIC ACTIVITY DIFFERENTLY

Methods Used to Organize Economic Activity Are:

Reliance on custom and tradition,

Government,

Individual self-interest. Since economic scarcity is universal, all societies must develop institutional arrangements for solving the basic economic problems of What, How Much, How and For Whom.

No Economic System Places Exclusive Reliance on a Single Method; the Difference Is In the Degree of Emphasis Given to Each of These Three Ways of Organizing Economic Activity.

The Institutional Structure a Society Develops and Relies On to Organize Activity Depends On:

The culture and its economic and non-economic goals,

The quantity and quality of available economic resources and the skill with which they are used,

The state of technology,

Understanding of how the economic system operates and willingness to apply this knowledge,

The constraints imposed by universal economic principles.

Economic Systems Are Man-Made and Dynamic Undergoing Change as Existing Conditions In a Society Change.

I. HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS

Human material wants and service wants as used in these instructional materials refer to the desire of individuals and groups to obtain those goods and services that provide pleasure and satisfaction. Used synonymously with economic wants, the term does not include recognition, status, and affectional wants. These, we assign to other areas of the social sciences. Human material wants or economic wants encompass a variety of products, i.e., food, shelter, clothing, automobiles, refrigerators, tractors, telephones, tools, machines. A particular good to satisfy an economic want may be a necessity to one person; a luxury to another. Similarily, in an earlier period of time and in a less complex society, a particular, good was a luxury, whereas, today in an advanced culture, the same good is a necessity, i. e., the automobile, electric refrigerator, telephone.

What the doctor, barber, dry cleaner, lawyer, auto repairman, or professor does for us also provides satisfaction and pleasure. These we refer to as services to satisfy particular service wants. Tangible goods such as refrigerators, automobiles, and typewriters can be thought of as "stored up services" and when we consider them in this sense the difference between goods and services is somewhat less. For example, most of us buy an automobile not simply to have a car but, more importantly, for the experiences that we could not otherwise have--riding instead of walking or riding a bicycle to work; taking the family on a weekend or summer vacation trip to nearby or distant places; organizing a car pool and driving the children to school. The new instructional materials on the economy that follow should help students to think of economic wants in this sense, that is, learning to view and think about economic goods and services in their everyday lives and the larger world as "stored up" services and as sources of experiences that make it possible for individuals and groups to achieve pleasure and satisfaction.

Each of us wants many desirable things and over time our wants seem to grow and multiply. At any point in time people as individuals and groups desire economic goods and services. Although our desire for a particular good or service such as bread, ice cream, or a hair cut can be satisfied over a short period of time depending on available income to purchase particular goods and services, we cannot get nor do we have enough of all the things we want when we consider wants in general. The need to ration income is an ever-present constraint operative for us as individuals, the local community, the state, nation and for people everywhere. The particular kind of good or service desired is influenced by the culture, by the productive capacity of the economy, individual income and the distribution of income, product development, advertising and sales promotion, the taste and preferences of individuals and groups. Since there are more competing wants than can be satisfied at the same time, individuals and groups must choose among available goods and services, between this or that big good or small good, between less of some and more of others. Thus, individuals as well as nations balance or weigh the anticipated satisfaction to be derived from particular goods and services against the cost. Ever-present are the constraints of money, the expenditure of energy involved, or time including leisure time that influence choice.

Most of our wants, especially those related to our physical-comfort wants requiring food, shelter, clothing (and a growing number of other goods and services in our economy which we consider necessary to satisfy our desire for health and comfort), are not "once for all wants." We refer to one billion bushels of wheat analysis of family, community and regional wants, selected readings, problems, and questions are based. In other words, the instructional materials are a means, not an end in and of themselves, to arriving at the main understandings.

To recap in abbreviated form, your "road map" should have clearly marked:

1. Man is confronted with competing wants and limited income.
2. Most economic wants require for their fulfillment a continuous flow or stream of goods and services.
3. The flow that is destroyed in the fulfillment of human material wants and service wants is the consumption of goods and services.
4. The urgency of desire is a function of the quantity of goods which the individual has available to satisfy his wants.
5. The size of the flow of goods and services and effective demand influence the extent to which wants are satisfied.
6. Human material wants and service wants are dynamic.
7. Economic wants and economic production are interrelated.
8. Human material wants and service wants can be satisfied in different ways.

as a stock of wheat, but if this were consumed and no more raised, our stock of wheat is gone. To satisfy our economic wants, the economy must somehow maintain a continuous flow of goods and services hour by hour, day by day, month by month, year in and year out to replace those that have been destroyed in rendering satisfaction and to satisfy the wants of annual additions to the nation's population. Given effective demand, the larger the flow of economic goods and services, and the more assured we are that the flow will move to a higher level, the higher the degree our wants are satisfied and the greater our feeling of well being.

Wants for particular goods can be satisfied over a short period of time, assuming effective demand and no change in taste, each additional unit of good satisfies a less intense desire than the previous unit. In other words, the extra satisfaction or utility an individual derives from each additional unit, be it a hamburger, a cup of coffee, or a pair of shoes is somewhat less with each succeeding unit. The first hamburger or cup of coffee has great utility, but the second a little less than the first, the third even less, and the fourth may be met with indifference. The utility or satisfaction furnished by the extra unit of any good varies with the individual depending on how many hamburgers, cups of coffee, or pairs of shoes it is extra to. "The urgency of desire is a function of the quantity of goods which the individual has available to satisfy that desire. The larger the stock the less the satisfaction from an increment. And the less, also, the willingness to pay."[1]

Consideration of the concept of economic wants properly deals with the principle of diminishing marginal utility as a basic understanding in economics. It confronts our own and all other economies with a very real and ever-present constraint. Discovering this universal principle, young adolescents should begin to develop some understanding about consumer behavior--why people tend to buy additional units of a product only if the price falls, and why producers strive to find ways of lowering the price of a product to sell larger amounts. In our economy, where a full employment level of output is an importantly held goal, hopefully, students can begin to understand why the principle of diminishing marginal utility makes for the development of new product lines and the contrivance of consumer demand. John K. Galbraith states it thusly: "So long as the consumer adds new products--seeks variety rather than quantity--he may, like a museum, accumulate without diminishing the urgency of his wants."[2]

In the instructional materials provided for students on the understanding, HUMAN MATERIALS WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS, it is important that the teacher study the student materials and understand their relation to the central understanding and the subsumed understandings in this section of the Teacher's Manual. It is these central understandings about economic wants that are the end-goals toward which the instructional materials and procedures are directed. These understandings are the end product of the teaching act if the new materials are effectively used. We cannot overemphasize the importance of using these underlying understandings or central ideas as "road maps" in helping students to begin to develop some understanding of economic wants. It is these on which the data gathering and

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1. John K. Galbraith. "The Dependence Effect and Social Behavior," in Private Wants and Public Needs. Edmund S. Phelps, ed. (New York: W. W. Norton and Company, Inc., 1962), p. 27.
2. Ibid., p. 29.

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* * *

NOTE TO TEACHER This is a copy of the letter we send to parents prior to teaching Economics: Choice Making. You may wish to use this letter or an adaptation of it.

* * *

Date ____________________

Dear :

Within the next ten days your son/daughter who is enrolled in Social Studies I at University High School will begin his/her study of the second unit in Course I--Foundation for the Social Studies. The unit is Economics: Choice Making.

In these new instructional materials that we have developed for the foundation course in the social studies at University High School, selected economic principles are introduced and partially developed as a foundation for the social studies courses that follow in grades nine, ten, eleven and twelve.

Students are involved in gathering data as a means of learning how to select, organize, classify, make inferences, pose hypotheses and ultimately to formulate tenable generalizations about economic data.

In their first assignment, they work with family consumption expenditures as a means of learning several important principles in economics, one of which is choice making. Over a period of years we have found that this becomes much more meaningful for students when they work with their own data rather than with "canned" data on expenditures. Teenage expenditures, while economically important $8-10 billion in 1963, represent only a small part of the total outlays. It is important, therefore, that each student work closely with someone who is responsible for managing a total budget. We hope you will help your child compile his listing of the many goods and services needed to operate your household during the current year, January 1 through December 30, 1968. The students will classify these data and determine the approximate consumption expenditures of his family for the current year.

The next step is for the student to adjust these expenditures to his own, albeit hypothetical, economic constraint or income. The purpose is not for the student to relive the economic drives of his parents but experience his own. Each student will use the median income after taxes of the North Central Region or the United States and not the actual income of his family.

For most students the median (middle) income will be above or below the actual income of his family. Those students whose family consumption expenditures exceed the median for the North Central Region will have the unhappy but challenging task of deciding what expenditures to curtail since the median income is the absolute amount of money available to them. Those whose family consumption expenditures are below the national median will have the happy task of determining how to spend their enlarged but limited income. It is both unnecessary and undesirable to use the family's actual income as the economic constraint since it is important for the student to make his own hard choices and a family's income is a private matter.

We urge students to consult with their parents. We hope you will spend an hour or two with your child. Parents who have done so have indicated that they found this to be a most valuable educational experience. And, you need not keep a budget. Approximate figures on consumption expenditures will do.

If you have questions, please let us know. In any case we hope you will read the instructional materials and share in the learning experiences your child is having in his introduction to the real world of economics.

Cordially yours,

Ella C. Leppert, Chairman
Social Studies Program, University
High School and Director, University
of Illinois Social Science Curriculum
Study Center

ECL/jlh

SECTION I

HUMAN MATERIAL WANTS AND THE ECONOMY

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENCE WAYS

CONCEPTS: human wants, economic goods and services, consumer, consumption expenditures

SKILL: Identifying and gathering data on family consumption expenditures for the current year

The concept of human material wants is basic to an understanding of man's economic institutions.

1. WHAT DOES THE FAMILY CONSUME? 1

To arrive at an understanding of human wants, students begin by gathering data on their individual family consumption expenditures. Each student is to prepare a listing of his family's expenditures for the current year, January 1 through December 30. Urge students to be as accurate as possible in anticipating the things for which family expenditures will be made during the unexpired portion of the current year as well as for the expired portion of the year.

Encourage students to think about the things that require expenditure of money to maintain their family for the current year. Avoid categories in this assignment since the expenditures that are entered in this first preparation will be used to build categories of consumption expenditures.

Since these data will be used in subsequent class sessions to develop categories of family consumption expenditures, concepts and generalizations as well as a class profile of consumption expenditures, it is important that students prepare Assignment 1 thoughtfully and with reasonable accuracy. If possible, provide time in class for students to make a reasonable number of entries on the assignment sheet. This should be completed as homework and checked with parents for additions and revisions. *

Note to Teacher

In the event that a student's family is unable or unwilling to assist him in collecting and preparing the family's approximate expenditures for the current year (January first through December 30), as explained in the next paragraph, then the teacher should suggest that the student use someone else's expenditures for his profile. This might be a close relative or friend of the family or even a senior citizen who might enjoy working on this kind of project. In any case the student must examine actual expenditures even if they are not those of his family and be able to compute the percentage of total expenditures for each category. He should not be given hypothetical expenditures since the meaning of CONSTRAINT is best understood in the actual choices that people make in rationing limited income among almost unlimited goods and services in the marketplace.

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*See letter for parents (p. xvii-xviii)

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

A. At any point in time people have innumerable unfilled material wants many of which derive from biological roots.

2 2. In this class session you are concerned with using students' data to develop categories of consumption expenditures. The sequence that follows is important to helping students develop correct categories of consumption expenditures.

SKILLS: Developing categories, criteria labeling

1 PROCEDURE: 1. Have students turn to their class preparation, the listing of family consumption expenditures, No. 1, in the STUDENT MANUAL. (You might take a few minutes to move about the class to examine the kind of preparation students have made and whether or not they have reasonably complete data.)

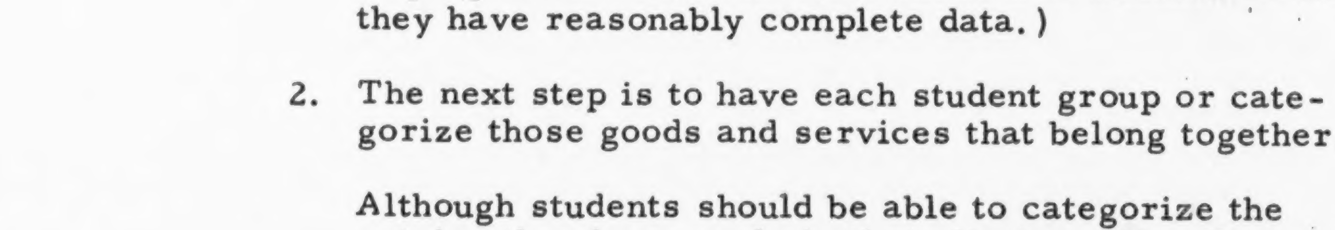
2 3 2. The next step is to have each student group or categorize those goods and services that belong together.

Although students should be able to categorize the entries they have made in their listing of family consumption expenditures, it may be necessary to have them consider these questions first:

WHY DO WE NEED TO GROUP OR CATEGORIZE THE ITEMS YOU HAVE IN YOUR LIST (No. 1)?

HOW SHOULD WE GO ABOUT DEVELOPING CATEGORIES FOR THESE ITEMS?

NOTE: If student responses indicate they need further clarification about the reasons for categorizing and how to categorize a long list of items, you might have a student step to the overhead projector to "try his hand" at grouping different shaped pieces of paper and explain his reasons for grouping them as he did.



Or, you might bring a number of different things to class (i.e., paper clips, pencils, eraser, chalk, book, candy bar, rubber bands, apple, articles of clothing, etc.) for students to group or categorize exploring their basis or criteria for assigning each item to a given group.

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

A. At any point in time people have innumerable unfilled material wants many of which derive from biological roots.

THINK!

3. For each purchase you assign to one of the barrels ask yourself: WHAT MAKES THEM ALIKE? WHAT DO THEY HAVE IN COMMON? WHAT IS MY BASIS FOR "THROWING THEM IN THE SAME BARREL"? 2 3

4. Each of the barrels has an adjacent box. In this boxed in space WRITE WHAT YOU THINK MAKES THE ITEMS IN THE BARREL ALIKE.

NOTE: To the Students:

Students may not use all the barrels. Some students may need more to set up additional groupings of expenditures. If so, have them draw extra barrels and boxes on another sheet and write in their entries as above.

Note to Teachers:

You will need to judge on the basis of your observation of the class the amount of time to be allowed for students to progress through each of the above steps in identifying similar entries, assigning them to barrels, and formulating in their own words the basis on which they view them as being similar. This set of criteria which is what they are in process of developing is written in the boxed in space adjacent to each of the barrels.

5. Several students might report the categories they developed and the expenditures included in each category. If the teacher enters these on a transparency or writes them on the chalkboard, they can be used for class discussion of these questions:

Developing and Refining Criteria

5.1 On what basis does one decide whether or not the things for which expenditures were made are alike and belong in a given category?

5.2 Let's apply our agreed upon criteria and put them to the test applying them to the items grouped together in these categories.

5.3 What differences do you see among the categories?

5.4 What labels might be assigned to each of these categories?

(Note): At this initial stage and with individual family expenditures the number of categories

T-4

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

A. At any point in time people have innumerable unfilled material wants many of which derive from biological roots.
B. The particular kind of good and/or service an individual wants is strongly influenced by the culture.
C. Most human material wants are not "once for all wants" hence they require a continuous flow of particular economic goods and services to satisfy some want. The larger the flow of goods and services the higher the degree a given want is satisfied.

Developing and Assigning Labels to Categories of Consumption Expenditures

may be somewhat less than when all the lists are compiled in a Profile of Family Consumption Expenditures represented by the families in the class.

2
3

However, it is assumed that some of these categories will emerge, in which case they should be labeled and the label written in the space provided on each barrel.

Food and Beverages
Tobacco
Housing (including fuel, light, refrigeration, water, operations, house furnishings and equipment)
Clothing, Materials and Services
Personal Care
Medical and Dental Care
Recreation
Reading and Education
Transportation (automobile, purchase, operation)
Gifts and Contributions
Personal Insurance
Other Expenditures

5. 5 Why do our families buy the things on our list of expenditures?

5. 6 Are some of these items more important than others? Why are they? Why?

5. 7 Does this suggest other categories that might be developed from our data?

5. 8 Why? What criteria are the basis for the new categories?

(Here we are encouraging students to develop flexibility in categorizing data.)

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

A. At any point in time people have innumerable unfilled material wants many of which derive from biological roots.
B. The particular kind of good and/or service an individual wants is strongly influenced by the culture.
C. Most human material wants are not "once for all wants" hence they require a continuous flow of particular economic goods and services to satisfy some want. The larger the flow of goods and services the higher the degree a given want is satisfied.

Useful aids for getting prices:

local and area newspaper ads;

Sears Roebuck
and
Montgomery Ward
catalogues

Advise students to look at price tags.

Other possible categories are:

Necessities and Luxuries
Goods and Services

Having developed the consumption categories--Food, Clothing, Housing, etc. the next step is to determine as accurately as possible the approximate amount each student's family spends in the current year for each of the categories.

The totals should be entered on Chart I, Individual Family Consumption Expenditures and totaled.

Percentage of the total should be computed and entered in the second column.

Note that this chart is placed in the Teacher's Manual so students are not provided with the categories prior to their having developed them in No. 2.

Copies of the chart should be distributed when the explanation for assignment 3 is made. Their preparation for assignment 3 is to be entered in the appropriate spaces in columns one and two.

The third and fourth column spaces are for subsequent entries explained in No. 4.

SKILL: Learning to ask important questions of data.

3. The next step is to set the stage for learning to compute family expenditures for each of the categories developed in 2. We'll begin by asking students to "stand off" and look at the barrels and to add their own questions to those suggested. Here you are looking for questions indicative of student awareness of differences in expenditures for each of the categories' (goods and services assigned to each of the barrels) 2-3

importance to the family, reasons for differences in cost of each category as well as total expenditure represented by all the barrels.

Students at Springfield asked these questions:

1. How much does our family spend for the things in each of these barrels?

2. Which barrel (category of purchases) costs the most? the least? What do all the barrels cost?

3. Are some of these categories more important to the family than others?

Note: It is important that students understand that if the several categories are to be compared, "price tags" need to be placed on each barrel.

3. 2 Family budget book
check book stubs
sale's receipts
newspaper advertisements
catalogues (Sears Roebuck and Montgomery Ward--a few copies for reference in the classroom library)
parents/members of the family who do the shopping
visits to super-market and stores to check price tags

4a 3. 4 Distribute Chart I -- INDIVIDUAL FAMILY CONSUMPTION EXPENDITURES after you have completed discussion with the class on items 1 and 2 above.

Please note that this chart was not included in the Student Manual materials since to have done so would have disclosed the categories which students have developed in their work on No. 2.

Directions for preparing assignment:

(1) Determine the $ expenditures for each of the categories on Chart I. Here students will need to refer to their preparation of 1 and 2 and use sources of reliable and available information to arrive at the current annual expenditure their family makes this year for food and beverages; clothing; housing, etc., as listed on Chart I.

Encourage students to do this as completely and accurately as possible enlisting the assistance of members of their families as necessary.

(2) Enter the expenditure for each category in the space provided in column one--$Expenditure on Chart I.

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

(3) Total and enter in last space column one--Total Family Consumption Expenditures.

(4) Then have each student figure the % of total expenditure for each category and enter in the space provided in column 2.

Note: No entries are to be made at this time in columns three and four.

It may be necessary to provide several class periods for completion of this assignment depending on how much of the data gathering they do as homework.

You may find it necessary to reteach students to compute percentage.

CONCEPTS: median income; competing wants; real or opportunity cost; market-price system.

SKILLS: comparing and contrasting sets of data; computing percentages; interpreting data; making hard choices among competing wants; formulating generalizations.

WHAT DETERMINES FAMILY CONSUMPTION EXPENDITURES? 6

3.5 In this assignment we introduce a new set of data, namely, the median income and family income distribution of the United States and the North Central Region for the current year.

Periodically the U. S. Department of Commerce makes available
data on family income for the United States. In August 1968, the
Department of Commerce reported that the median (middle) family
income for the year 1967 was $8017 for the United States and
$8296 for the North Central Region which includes Illinois. The
Department of Commerce also reported the median income of non-
whites and Negroes which are shown in Table 1 - Family Income 5
Distribution of United States and North Central Region by Total
and Race for 1967 and estimated median for 1968, page 5 in
Student Manual. Table 1 also provides median income figures
for the year 1968 which were estimated by the SSCSC. The
approximate median family income for any future year can be
simply calculated by the teacher by allowing a 4 to 5 percent
annual increase. For example, the approximate median income
of the United States for the year 1969 will be $8839 if we assume
a 5 per cent annual increase.

The SSCSC has also estimated the median income after taxes of the United States and North Central Region for the years 1967-68

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5 which is shown on Table 1 in Student Manual, page 5. This represents money income after deduction of personal taxes (Federal, State, and local income taxes, poll taxes, and personal property taxes). Property and sales taxes were not deducted as they are generally reflected in the cost of family expenditures.

We introduce the national median income figure in this assignment as a means of helping each student to develop an understanding of economic constraint--what economics is all about. The major constraint operating on family expenditures is money --more correctly the lack of it and its most common form is money income in a market economy.

5 Table 1 classifies the 49, 834,000 American families in 1967 in 14 different income ranges. Presumably all of these families have some monetary or money constraint on expenditures particularly if we take into account the desire to save.

Which of the 14 income ranges should we choose as the economic
constraint for the Class Profile? Explain to the class that in
6 preparing 3. 5 they are to assume that their own family income
after taxes for the current year (1968) is $7709, the median for
the North Central Region. Classes outside the North Central
Region should use the national median shown on Table 1 in the
Student Manual. This is the total amount students are to have
in the current year to take care of their expenditures for all the
goods and services they have assigned ("thrown") into the
barrels in developing the categories for the many many different
goods and services purchased by their families in the current
year. No more! No less! No I. O. U.'s! No credit or other
sources of income! The median income figure is the students'
total purchasing power for the year. Have the student enter the
regional or national median figure (which ever is more appro-
4a priate) in the space opposite Total Expenditure in the third
column on Chart I.

We have chosen the median income after taxes for two reasons. First, our major concern is with the principle of ECONOMIC CONSTRAINT over EXPENDITURES and Not with the actual income that the students' families have available to make their expenditures. It is both unnecessary and undesirable to use the family's actual income as the economic constraint since there is a great multiplicity of income levels within every classroom and a family's income is a private matter.

The second reason for choosing the national median income is that it is the middle income or constraint and hence a kind of social norm or indicator. Half of the nation's families have incomes above the median and half below. This can be readily

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seen on Table 1. The same is likely to be true of the class. The principle of CONSTRAINT will be operative whether the students' family income, which need not be disclosed, is above or below the median. Those below the median will have the happy task of determining how to spend their enlarged but limited income among the almost unlimited goods and services available to them in the market place. Those above will have the unhappy but challenging task of deciding what expenditures to curtail since the median income is the absolute amount of money available to them. The major concern here is whether the student will make a proportional adjustment in his expenditures whether he is enlarging or curtailing them. Will he want proportionally more or less of the same goods and services or will he basically alter his expenditures to accommodate the new constraint which, in this case, is the median income and not the actual income of his family. 5

Of equal significance is to understand WHY the student selects one pattern of expenditure instead of another as the constraint is increased or decreased. For example, if the student's actual family income is below the regional median, will he continue to spend the same proportion of his new and enlarged income (the median) on food, recreation, and education?

One final reminder. There are no free goods. To get more of one good requires the giving up of other goods. The cost of any good or service is what the individual has to give up in order to acquire it. This may be other goods and services or even leisure.

Students should work with the data they have collected in preparing prior assignments and examine thoughtfully the kinds of goods and services that comprise each of the categories in their first column of $ expenditures.

The students should be somewhat more perceptive of basic and non-basic expenditures made to maintain and operate their own homes after examining price tags, arriving at $ expenditures for each of the categories, and computing percentage of total expenditure for each category.

Now they are ready to stand off, as it were, and examine what they have done in the process of developing the data just entered in columns 3 and 4 of Chart I. 4a

3.5 (a) WHAT DECISIONS DID THEY MAKE IN ARRIVING AT THE NEW $ EXPENDITURE FIGURES IN COLUMN 3?

Questions 3.5 (a), (b), (c), (d), (e), (f), and (g) ask each student 6
to reexamine the data he has developed and entered in the first 7

two columns of Chart I. His response to the questions he asks of his own family consumption expenditure data is to be written in the space provided in the Student Manual.

Note to Teacher

6 7 (d), (e), (h). Here we deal with the income effect as well as the allocation effect of price changes on family consumption expenditures. Students will probably see first the income effect having dealt with the questions about their own family consumption expenditures. More income makes possible the purchase of more goods. But, there is also the allocation effect of price changes in a market economy. As spending units--households--make choices and express their preferences for goods and services (effective demand), they signal businessmen and producers to bring resources into production of the desired goods and services. The particular choices households make may affect prices especially in the short run and the opportunity costs involved in choice making. If the price of education increases in relation to the price of other goods the household will have to give up more of these other goods and services just to maintain the same level of education. Price changes also affect income distribution since one man's expenditure is another man's income.

Thus consumer choices stimulate businessmen to increase output, thereby "pulling" *resources into production. Conversely, declining* consumer demand tends to "push" resources out of production.

The choices families make based on taste, income, and relative price are "registered" in the market and producers respond, or do not respond, to these preferences. In a market economy the price market system determines price and allocates productive resources in response to the preferences of households.

You might, for a change of pace, have the class organize small buzz groups (not more than five students to a group) to discuss for ten minutes the similarities and differences in the analysis they made in arriving at their answers to questions 3. 5 (a) through (i). 7

Follow the buzz group session with the class developing a series of statements about determiners of family consumption expenditures (j). 7 These should be entered in the Student Manual in the space provided under (j).

Significant changes in the price of goods and services (consumed/wanted) by family members. The importance family members place on certain goods and services--what they are willing to give up to have the more desired good or service (opportunity cost, competing wants, diminishing marginal utility).

Representative Student Responses: (Springfield and Park Forest)

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

"It was very difficult to cut the entries--I couldn't decide what to cut off."

* * * *

"I couldn't decide what to add. You see the median was more than we spend so I had to decide where to spend the extra money."

* * *

"My problem was whether I should cut medical care and household operation."

NOTE: (d) and (h) Here we raise the question of what difference significant changes would make in family expenditures--a very real determiner of whether or not the family can maintain its present level of living, is able to increase it or is compelled to reduce it. Here, in fact, we are introducing the market as a determiner of price and an important "rationer" of what the family is able to consume by way of its purchase of goods and services.

(i) Representative Student Responses: (Springfield)

"My mother would have to take the bus to work instead of our new car. We wouldn't have the expense of repairing and operating the new car. When I'd miss the school bus I'd have to walk because Mother wouldn't be able to take me in the car. We'd eat out less and not eat between meals."

* * *

"I added to food because we'd like to eat out--now we could." I also added to clothes because I want to look a little bit nicer. I added to recreation because I'd like to have more fun by skating and bowling and also to education since I'd like to learn to play a musical instrument."

* * *

"We'd cut out expensive food and give fewer gifts at Christmas. We'd drop some of our magazine subscriptions and be more careful with water and electricity. We'd go to fewer movies, swimming places, and not take long trips in the summer."

3.6 These questions require student analysis of the percentage total expenditure in columns 2 and 4 by category. Comparisons of these two sets of data provide the base from which students "discover" an important relationship between income and expenditure. As income rises, a smaller proportion of income is spent on basic wants and a larger amount is available for discretionary spending. As income declines, basic expenditures loom larger. This can be seen clearly on 8

Table 3--Personal Consumption Expenditures By Type of Product and Table 4--Summary of Family Expenditures, Income, and Savings, By Income Class All Urban Families and Single Consumers--North Central, 1960-61. 34 41

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

34 Table 3 shows how the pattern of family expenditures has changed as the income of the country increased over time.

41 Table 4 shows how the pattern of family expenditures varies among families with different incomes at any one time. The high income families have a different pattern of expenditures than low income families. It is important that students understand WHY the pattern of expenditures changes as the amount of income available to the family or nation increases or decreases.

9

HOW DOES OUR CLASS PROFILE COMPARE WITH CONSUMER EXPENDITURES FOR USA?

USING DATA TO PREPARE CLASS PROFILE OF FAMILY CONSUMPTION EXPENDITURES

T-17/19 A master tally sheet is provided which will facilitate the preparation of the Class Family Consumption Expenditure Profile.

Space is provided on the TALLY SHEET for each student to write in the appropriate spaces opposite each category the $ Expenditure and Percentage of Total Expenditure from columns 1 and 2 of his CHART I. 4a

Note that students should enter in the first column of the Tally Sheet the total anticipated family expenditure figure which is the last entry in column one of their Chart I.

No names are entered on the Tally Sheet.

PLANNING WITH THE CLASS FOR PROCESSING DATA ON THE TALLY SHEET:

Plan with the class for tabulating the data entered on the Tally Sheet and computing the class average for the $ Expenditure and the Average Percentage of Family Consumption Expenditures.

We suggest you provide class time for students to work in teams of 2 each to process these data. Each team can work with the data for the category or categories assigned to it. Team members should check each other's computations and you may wish to set up one team that spot checks all teams to assure accuracy in addition and in figuring percentages. It may be necessary to review the correct procedure for determining the average percentage total expenditure for each of the thirteen categories.

T18/20 The last column on the Tally Sheet provides space for individual student entries on family size. From the total size, the Class Family is determined.

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

Two sets of Tally Sheets are provided in the Teacher's Manual. One can be retained by the teacher as a Master Data Sheet and the other cut in strips by categories for computing teams to use.

CHART II -- OUR CLASS PROFILE OF FAMILY CONSUMPTION EXPENDITURE 7a

When this work is completed, distribute CHART II -- OUR CLASS PROFILE OF FAMILY CONSUMPTION EXPENDITURES and have students enter the correct data as prepared by the computing teams.

CHECKING DATA ON CLASS PROFILE FAMILY EXPENDITURES WITH CONSUMER EXPENDITURES FOR URBAN UNITED STATES AND URBAN NORTH CENTRAL REGION

Table 2 (TM) presents selected data on family consumption expenditures for Urban United States, 1960-61, and Urban North Central Region, 1960-61. These data are collected and summarized by the Bureau of Labor Statistics, United States Department of Labor. They are introduced here to provide students with survey data on family consumption expenditures both in $ expenditure and as a percent of expenditures for current consumption. see T-16

You may duplicate Table 2 (TM) to facilitate student use in studying the data and in comparing with the data for the same categories of consumption expenditures on Chart I (the student's own family's consumption expenditures) and Chart II (the class profile of consumption expenditures). However, this should not be given to students until they complete their own. T-16

1. Have students examine the data on Urban United States and North Central Region and Chart II (Class Profile) for:(1) similarities and (2) differences in consumption expenditures.

2. Examine the data on Table 2 (TM) and Chart I (their own family consumption expenditures) for: (1) similarities and (2) differences in consumption expenditures.

3. Examine the data on Table 2 (TM) on Urban United States and Urban North Central Region for:(1) similarities and (2) differences in consumption expenditures.

4. What generalization about family consumption expenditures do these four sets of data support?

   You may want to provide opportunity for each student to develop his own generalizations in writing prior to class deliberation.

Space is provided in the Student Manual for students to record their interpretation of the data as suggested in items 1 through 4 above. 9 10

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

5. PREPARING A GRAPHIC/VISUAL PRESENTATION OF CLASS PROFILE.

This is an appropriate time to provide opportunity for the class to consider how they might take the data for their class profile of family expenditures and plan together for making graphic/visual aids.

Statistical data such as students have been collecting, organizing, and interpreting are even more useful when presented in a visual media. In the process of planning and developing this assignment, students reflect, reexamine, clarify and deepen their understanding of concepts related to family consumption expenditure. The final product can be a useful teaching aid for students and teachers to use as work proceeds with the unit.

You might have students move into buzz groups of 4 or 5 each to pool their ideas and sketch out a design for the proposed graphic/visual aid. Each group can report its proposal to the class which decides, on the basis of group developed criteria, what proposal is to be selected for development. It may be that each group has a proposal of merit in which case each could develop its visual presentation of the Class Profile Data.

You may wish to approach this differently but however it is done provide opportunity for all students to participate in the initial planning and in so far as facilities permit to make some contribution to the completion of the visual aid.

TO THE TEACHER:

Notes on 'The Changing Pattern of Consumer Spending, 1950-60we included here for your information and to share with students in their analysis of family consumption expenditures. Also see Table 3 which includes more recent data for 1967 (p. 34).

TABLE 2

CONSUMER EXPENDITURES AND INCOME
Urban United States, 1960-61 1/
Urban North Central Region, 1960-61

Item	Average per Family Urban United States $ Exp.	% of Exp.	North Central $ Exp.	% of Exp.
Expenditures for current consumption 2/	$5,390	100.0	5,269	100.0
Food (and beverages/	1,311	24.3	1,353	25.7
Tobacco	95	1.8	93	1.7
Alcoholic beverages	90	1.7	1,558	29.6
Housing, total 3/ (Chicago)	1,588	29.5		
Shelter, fuel, light, refrigeration, and water	992	18.4	995	18.9
Household operations	319	5.9	291	5.5
Housefurnishings and equipment	277	5.1	272	5.2
Clothing, materials, services	558	10.4	539	10.2
Personal care	155	2.9	150	2.8
Medical care	355	6.6	341	6.5
Recreation	217	4.0	214	4.1
Reading and education	109	2.0	108	2.0
Automobile purchase and operation	700	13.0	722	13.7
Other transportation	93	1.7	80	1.5
Other expenditures	119	2.2	112	2.1
Gifts and contributions	303	5.6	277	5.3
Personal insurance	324	6.0	330	6.3
Money income before taxes	6,691		6,711	
Money income after taxes	5,906		5,934	
Other money receipts	82		97	
Number of families in sample	1/ 9,476			
Average family size	3.1		3.1	
Percent nonwhite families	12		9	
Percent homeowners	53		58	
Percent auto owners	73		76	

1/ Data for Alaska families surveyed were not included for 1960-61.

2/ The classification of items in the 2 surveys (1960 and 1961) were not strictly comparable.

3/ The total may exceed the sum of the 3 subclasses because it includes items listed separately on this table.

Source: United States Department of Labor, Bureau of Labor Statistics Report No. 237-55, December 1963, and No. 237-35, May 1964.

Tally Sheet - Family Consumption Expenditures

T-17/19

Total Anticipated Family Expenditure	Food and Beverages		Tobacco		Housing		Clothing--Materials and Services		Personal Care		Medical Care	
	$	%	$	%	$	%	$	%	$	%	$	%

T-18/20

Recreation		Reading and Education		Automobile--purchase & operation		Other Transportation		Gifts and Donations		Personal Insurance		Other Expenditures		Number in Family	
$	%	$	%	$	%	$	%	$	%	$	%	$	%	$	%

T-17/19

Tally Sheet - Family Consumption Expenditures

Total Anticipated Family Expenditure	Food and Beverages		Tobacco		Housing		Clothing--Materials and Services		Personal Care		Medical Care	
	$	%	$	%	$	%	$	%	$	%	$	%

T-18/20

Recreation		Reading and Education		Automobile--purchase & operation		Other Transportation		Gifts and Donations		Personal Insurance		Other Expenditures		Number in Family	
$	%	$	%	$	%	$	%	$	%	$	%	$	%	$	%

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

CONCEPTS: Public Goods — Public consumption expenditures
Private Goods — Private consumption expenditures
Economic Constraint

SKILLS: distinguishing between public and private expenditures
identifying instances of public expenditure
participating in group work as leader and group member

WHAT DOES OUT CITY CONSUME? WHAT DOES OUR LOCAL SCHOOL DISTRICT CONSUME?

5. Up to this point we have been concerned with family consumption expenditures as a means of introducing the concept of economic constraint that income places on the family as it seeks to satisfy its desire for economic goods and services.

Here we turn to the public sector of the nation's economy selecting either the local city or school district to introduce the concept of ECONOMIC CONSTRAINT in the public sector and to also introduce the concept of PUBLIC or SOCIAL GOODS AND SERVICES as distinguished from PRIVATE GOODS and SERVICES introduced in the family consumption expenditure problem. 12

PROCEDURE: We'll use the same procedure as we did with the family asking the students to develop a list of those things that require the expenditure of money to operate and maintain their city during the current year, January through December 30. Consultation with parents, other adults and students will assure a more complete listing of the city's consumption expenditures.

This preparation can be made in several different ways. You may choose to:

Have students prepare individually a list of their city's consumption expenditures enlisting the help of parents only after they have done all they can without assistance from those more knowledgable about the expenditures made by the city. 12

Have students organize into working groups of no more than five members each to develop together a list of the city's consumption expenditures. Group reports can be used to develop a Master Class List of the city's expenditures.

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

On completion of the listing of the city's expenditures and checking with parents and other adults as well as members of the class to assure a reasonably complete list of city's consumption expenditures, students individually should prepare answers to the following questions.

Provide time for class discussion on completion of preparation of these questions. The purpose of the preparation has been to distinguish between the kind and nature of family and community or private and public consumption and expenditure.

Sample Student Response to:

13 5.1 WHAT DIFFERENCES ARE THERE BETWEEN THE THINGS YOU HAVE LISTED AS EXPENDITURES FOR YOUR FAMILY AND FOR YOUR CITY.

"Many more people use the things purchased by the city. Schools are for all the children in the school district. Policemen protect all of us. Firemen are hired to protect property of more than just our family and our property.

Things bought by the city require larger expenditure than our family can make. Our family couldn't afford to build a school, a fire station, pave the streets, and maintain the city swimming pools in summer.

City's expenditures have to be approved by councilmen elected by our families as voters. This is different from having our parents decide what our family buys.

Money to pay for the things the city buys come out of taxes which we all pay."

13 5.2 Why The Difference?

"Cost. Some things we can't do for ourselves as families and individuals so we go together and each pays taxes to get what as individuals we couldn't have. Examples are schools, parks, paved streets, police and fire protection."

5.3 NOTE: Here we are concerned with SOCIAL BALANCE or the relationship between what a community produces and what it consumes. John K. Galbraith in his The Affluent Society states:

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

Barrels with interlocking boxes are provided in the student Manual 14
(pages 14-15) for students to develop their categories and write 15
their criteria.

Criteria should be operative and students are reminded to be prepared to make these specific when they report their categories to the class.

Labels should be assigned to each category.

Although placing price tags on each of the categories as was done with the family consumption expenditures would contribute importantly to student understanding of the cost of operating the city, the problem of obtaining the necessary information is even more difficult than pricing family's purchases for the current year. However, if the class has access to consultant help from city officials who will work with the teacher and a class committee in securing the necessary information, this would be a most useful learning experience, contributing to an understanding of constraint in the operation of the city.

Or, arrangements might be made with a city official to meet with the class and share with the students the data on total expenditures and city income for the current year. For best results, the official should be informed, in advance of meeting with the class, about the work done to date on family and city consumption expenditures.

If the class chooses the local school district, arrangements should be made in advance for the school's administrator or a member of the board of education to examine the categories and prepare an estimate of cost prior to meeting with the class.

If figures for total expenditure by category are available for the current year, students can compute the percent of total expenditure for each of the categories. Major filled and unfilled wants should be viewed in relation to sources of income.

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

CONCEPTS:

public/social goods	scarcity
public expenditures	economic wants
	economic goods

SKILLS:
- reading bar graphs
- interpreting and analyzing data
- making inferences
- checking inferences

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16 WHAT DETERMINES OUR CONSUMPTION OF HIGHER EDUCATION?

Here we move to the state and introduce data on current constraints in higher education that illustrate increasing demand for beyond high school education and limited resources in colleges and universities to satisfy the desire of an increasing number of youth for education.

17 Two sets of data on higher education in Illinois are presented in Chart A and B. Since these data were prepared by the Master Plan Committee they are of some significance at this particular time when Illinois is confronted with finding a solution to "building enrollment capacity for the accelerating numbers of qualified young people who seek a college education at all levels." The Master Plan for Higher Education in Illinois, adopted by the Board of Higher Education in the summer of 1964 projected college enrollment in relation to the college-age population. College enrollments for Illinois will more than double between 1963 and 1980. That is, there were 243,000 students in 1963 who attended private and public, junior and degree granting institutions. It is estimated that there will be 162,000 more in 1970--if there is room, and 333,000 more in 1980.

The Master Plan projected a 96% increase in public junior colleges by 1970 and a 41% increase in private institutions.

Students will have frequent opportunity to use graphic data in this unit hence the importance of helping them to develop skill in handling data on charts, tables, graphs.

17 Provide time to have students familiarize themselves with these aspects of Charts A and B in this assignment:

1. The title and what it tells the reader
2. The vertical axis
3. The horizontal axis
4. The legend or key
5. Source of data and date

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

Questions 2-7 require interpretation, and analysis of data presented in 16
Charts A and B and selected excerpts from a special report on the 17
status of the University and the future. 18

Individual preparation prepared as homework should be used as a basis for class discussion in which the problem of constraint is examined in light of the data provided; the kind of expenditures required to provide educational facilities for the accelerating numbers of qualified youth; and making comparisons with the entries listed in family consumption expenditures to help students distinguish between private and public expenditures; between public and private goods.

Answers to Questions 1.(1.1-1.5) and 2.

1.1 243,000

1.2 1960: 407,000 1980: 576,000

1.3 1963: 33,000 1965: 38,100

1.4 1970: 57,300 1970: 75,200 1980: 84,200

1.5 More than double; 333,000 more in 1980 than in 1963

2. 51,200 more in 1980 than in 1963

T-26

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

CONCEPTS:
- public goods
- private goods
- private consumption expenditures
- public expenditures
- economic scarcity
- economic wants

SKILLS:
- Defining an economic problem
- Gathering information about a problem using multiple sources
- Making inferences
- Checking inferences
- Suggesting alternative courses of action
- Weighing consequences of possible alternative courses of action
- Formulating a program of action

Readings

23
24
26

Three readings are provided here including:
Appalachia: Challenge to Poverty
The Appalachian Volunteers
Sometimes It's Statistical, But Poverty Is People

The first two readings introduce economic constraint as concerns the private and public sectors of an important regional area in our country. These should be supplemented with information in current periodical literature in your school library and your own material's file. Those schools that have the reprints "The Dusty Outskirts of Hope" and "Three Stories of the Day" by Mary Wright, a social worker in the Southern Mountains, will find these a useful addition for student reading as well as the recommended books and articles listed on the next page. The reading, "Sometimes It's Statistical, But Poverty Is People" is included with this thought: It is very easy to live one's life without ever coming in contact with the homes and the people as do the caseworkers such as Mary Wright in the Southern Mountains or Harry Caudill, Rebecca Caudill and Jack Weller. In too many cases average, middle and upper class residents do not know the poverty story--that poverty is a gray, grinding existence that its victims do not know how to climb out of. Hopefully, students will begin to think about this and its economic, social, and political dimensions.

Film

The film, Poverty in Rural America. 27 min. B&W 16 mm sd. is recommended as an excellent source of information on the problem of poverty, unemployment, and underemployment in Appalachia and other marginal agricultural regions in the United States. The film can be obtained free of charge from the U. S. Department of Agriculture, Office of Information, Motion Picture Service, Washington, D. C. 20250.

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

Filmstrip

Filmstrip, The War Against Poverty. The New York Times Filmstrip in Current Affairs, March 1966, with script manual. Order from New York Times Co. $6. Script is an excellent source of information on poverty for both teachers and students.

Books:

Recommended for your professional and school libraries.

Caudill, Harry M. Night Comes to the Cumberlands (Boston: Little Brown, 1963), is highly recommended as a source of information on the human and natural resources of the Southern Mountains. Harry Caudill is the son of a coal miner and he, too, worked in the mines prior to continuing his education. Today he practices law in Appalachia. We recommend pages 361-376 for information on a regional economy based on coal and what this industry requires in skilled workers.

Caudill, Rebecca. My Appalachia (New York: Holt, Rinehart and Winston, 1966). In words and pictures here is Appalachia --a story of Appalachia in the year's of the author's youth when the snow was still clean before the mines came and before the bitterness and bloodshed began. Poverty is a book word when the poor don't know they are poor and in Appalachia pride and dignity filled a half empty stomach.

Weller, Jack. Yesterday's People (Lexington, Kentucky: University Press, 1965). The most talked about and widely reviewed book in 1965 on Appalachian problems and the War on Poverty.

Low-Income Life Styles. Lola M. Irelan, Editor, (Washington, D.C.: Superintendent of Documents, U. S. Government Printing Office, U. S. Department of Health, Education and Welfare, Publication No. 14, 1966).

Questions 1-6 inc.

Provide class time for students to read and organize their information to discuss the questions in their Student Manual. 20 21

Students should consult the Readers Guide to Current Periodical Literature for current articles on poverty among the non-white population and poverty programs. You and the students may find the following articles helpful.

"The White Man Can't Help the Negro Ghetto," Saturday Evening Post, January 29, 1966.

"Dangerous Poor," Saturday Evening Post, July 16, 1966.

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

"The Tragedy of Appalachia," Saturday Evening Post, August 22, 29, 1964.

"How About the Non-White Poor" U. S. News, October 4, 1965--selected portions of Caudill's Night Comes to the Cumberlands.

"The Valley of Poverty" Life, January 31, 1964.

"The Invisible Americans" Saturday Evening Post, December 21, 1963.

7. Since Appalachia and the "War on Poverty" are important domestic issues, students should on completion of questions 1 through 6 consider these questions:

Why is poverty a problem of national concern (even in an affluent economy)?

What can be done to deal with the problem of poverty in Appalachia and other regional areas (not to overlook our own state and local communities)?

You may wish to have students discuss these questions in small groups with a spokesman reporting the group's thinking. Here you are providing opportunity for students to reexamine their definition of poverty, to formulate tentative hypotheses, to consider the facts from a range of sources, to revise initial hypotheses, to suggest consequences, to decide on a program of action--indeed, engage in economic analysis of a current economic issue.

22 Space is provided on page 22 for each student to write his considered recommendations and/or program of action.

T-29 Note to Teacher — See article that follows--"Conquering Poverty in the US by 1976" for an explanation of the poverty standard and the complexity of coping with poverty in an affluent economy.

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

The particular kind of good and/or service an individual or society wants is strongly influenced by the culture.

Most material wants are not "once for all wants" hence they require a continuous flow of particular economic goods and services to satisfy some want. The larger the flow of goods and services the higher the degree a given want is satisfied.

To obtain maximum satisfaction, individuals and a society need to balance anticipated satisfaction and the cost (time, leisure, money, energy output) of satisfying particular wants.

Wants are dynamic--changing continuously and reflecting changes in the tastes, preferences, and values of individuals and a society as well as the productive capacity of the economy.

CONCEPTS: dynamic nature of wants
intensity of desire
generalization
advertising

SKILL: formulating generalizations
interpreting and analyzing data

30 WHAT IS THE NATURE OF ECONOMIC WANTS

Here we consider the dynamic nature of economic wants in the present in our own culture, the factors that influence the dynamic nature of economic wants as well as intensity of desire.

To avoid premature verbalization, no questions are provided on page in the Student Manual. You may prepare ditto copies to distribute when you explain the assignment. Two short readings are provided--"When a Woman Goes to Market" and "Marketing Report." Directions and questions for this assignment follow:

31 1. Have students read the short selection in their manuals on "When a Woman Goes to Market" and "Marketing Report," and then prepare their answers to the questions in their manuals adding their own additional sheets as needed.

   1.1 What do these readings tell you about the expenditures America's housewives annually in grocery stores?

   1.2 What, according to these readings, influences the buying habits of American housewives?

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BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

1.3 Teenagers are also important consumers of economic goods and services as shown in a recent survey made in Seventeen magazine. Seventeen reports:

- the average teenage girl spends $325 a year on her apparel wardrobe.
- the 11,065,000 teenage girls have $6.3 billion a year of their own to spend.
- these 11,065,000 teenage girls spend $3.7 billion annually on apparel; $1/2 billion on footwear, and some $450,000,000 on cosmetics.
- during August and September 1963, the nearly 5.7 million high school and college girls spend $1.4 billion on "back to school" fashion and the non-fashion merchandise. (Institute of Life Insurance and Health Insurance, Fall, 1964.)

You are one of these teenage consumers in USA today. What influences your buying habits?

Note to the Teacher This is an opportune time to consider advertising as an important factor in influencing buying habits. Have students look in current periodicals and newspapers for advertisements to illustrate their answers to 1.2 and 1.3.

Student committees might arrange bulletin board displays featuring factors that relate to the dynamic nature of economic wants.

2. Turn now to Table 3 - PERSONAL CONSUMPTION EXPENDITURES by Type of Goods and Services on page 34. 34

2.1 Compare the percentage of personal consumption expenditure made for food in 1950 and 1967.

2.2 Compare the percentage of personal consumption expenditure made for clothing in 1950 and in 1967.

2.3 How do you explain the changes expenditures for food and clothing in the period, 1950-1967?

2.4 What categories of consumption expenditure increased significantly in the period, 1950-1967? How do you account for the increases?

2.5 What categories show the smallest percentage increase? Why?

2.6 What generalizations can you make from these data about consumer spending patterns of the American people?

I

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

The particular kind of good and/or service an individual or society wants is strongly influenced by the culture.

Most material wants are not "once for all wants" hence they require a continuous flow of particular economic goods and services to satisfy some want. The larger the flow of goods and services the higher the degree a given want is satisfied.

To obtain maximum satisfaction, individuals and a society need to balance anticipated satisfaction and the cost (time, leisure, money, energy output) of satisfying particular wants.

Wants are dynamic--changing continuously and reflecting changes in the tastes, preferences, and values of individuals and a society as well as the productive capacity of the economy.

CONCEPTS: dynamic nature of economic wants over time; economic wants; private goods; public goods; data; generalizations

SKILL: gathering, organizing, comparing, and contrasting data on economic wants for two different periods in time; formulating generalizations based on the data

WHY DO HUMAN ECONOMIC WANTS CHANGE OVER TIME?

The dynamic nature of human wants with emphasis on change over time in our own country is the focal point in this assignment.

Using the colonial New England family introduced in the unit, The Family in Society, students will need to compare and contrast the economic wants of a seventeenth century New England family with those of families today. Sources of data are the materials they have used in the family unit and additional readings provided for this purpose along with their own class family profile of family expenditures.

1. In class, prior to any reference to the readings on the colonial New England family in the manual, have students assume that they and their family live in colonial New England in the period, 1650-1700. The colony is Plymouth, Massachusetts. Have them prepare their individual lists of all those things that would be essential to maintaining/operating their homes. (List I)

   Allow 10-15 minutes for students to prepare their lists. This will give you time to move about the class and make some estimate of the extent to which students are drawing on their earlier study of the colonial New England family.

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

2. Now we are ready to introduce the readings, "The Colonial Family in 36
New Plymouth" and "The Family in the Early New England Colonies."
Ask students to read these two selections carefully to identify all of the
economic goods specifically mentioned in the readings and enter these
under List II. Some, of course, may need to make revisions by crossing 35
out any incorrect first entries. Note that students are engaged in
building a set of data using as sources their previous study of colonial
New England families and the additional readings used in this assignment.
When this is done accurately, have them use these data and prepare
their best answers to the following questions:

2.1 What were the economic wants of colonial families described in
the two readings, "The Colonial Family in New Plymouth" and 36
"The Family in the Early New England Colonies." You may find 38
it necessary to recheck the readings to prepare an accurate list
of economic wants.

2.2 Develop categories for the economic wants you list in 2.1.

2.3 Turn to your Class Profile of Family Expenditures and compare with the entries you have made in answer to 2.1 and the categories you prepared for 2.2.

What differences do you find?
What similarities do you find?

2.4 How do you account for these differences and similarities? Give specific examples drawn from your Class Profile of Family Expenditures, from your preparation of 2.1 and 2.2 above.

2.5 After the the class has discussed questions 2.1 through 2.4 assuming students have been accurate in identifying economic wants in the readings on the colonial New England and in comparing and contrasting these with their own economic wants on their Class Profile of Family Expenditures, have students formulate generalizations. We are interested, at this point, in determining whether or not using these two sets of data (for the colonial family and their own family expenditures in mid-twentieth century, students perceive the dynamic nature of economic wants over time.

It may be that your students will benefit at this point from formulating in writing their own individual generalizations. This, again, gives you opportunity to observe individual student work--identifying difficulties they may have in using the data to formulate generalizations. Then have them move into small groups using the small groups as a check point with each group preparing a statement of generalizations which in turn will be reported to the class checked and revised in a teacher led session. In this way a generalization goes through three stages of refinement and students move from one check point to another using the resources of the small group and then the class group.

BASIC UNDERSTANDING: HUMAN MATERIAL WANTS AND SERVICE WANTS ARE VIRTUALLY UNLIMITED AND CAN BE SATISFIED IN DIFFERENT WAYS.

CONCEPTS: Change, Economic Wants, Goods, Services

SKILLS: Alternative Ways of Satisfying Economic Wants in our own and other cultures
Formulating generalizations

37 HOW ARE ECONOMIC WANTS SATISFIED?

The second characteristic of human material wants and service wants is considered in this assignment--that wants can be satisfied in different ways.

39 1. Have students individually or in small groups suggest alternative ways of satisfying these economic wants in Plymouth Colony and enter in the spaces provided in their Student Manuals.

Shelter
Food
Clothing
Health
Education
Recreation
Transportation

40 2. Have students suggest alternative ways of satisfying these same economic wants in the United States today and enter in the spaces provided in their Student Manuals.

3. Have students examine the two sets of entries noting ways in which the same economic want, i.e., food, clothing is satisfied. The two sheets have the economic wants in the same position to facilitate comparison.

4. Now, have students compare and contrast their two sets of entries for all the wants. What do they find? How do they account for differences and similarities?

5. What generalizations can they formulate about the ways in which people in our own country today and in Plymouth Colony satisfied these economic wants?

Note: We are dealing here with change over time.

BASIC UNDERSTANDING: HUMAN ECONOMIC WANTS DIFFER AMONG INCOME GROUPS AT ANY ONE TIME?

Here we are concerned with income as a constraint that influences preferences, tastes, goals, and values of members of households as reflected in patterns of family consumption expenditures.

The data presented on Tables 1, 4, and 5 in the Student Manual can and
should contribute importantly to student understanding of income acting as 5
a major constraint and as an influencer of patterns of consumption expendi- 41
ture by income level. The procedure for working with these data as a 42
means of arriving at these understandings is as follows:

STEP I: Student Groups Select an Income Level and Examine Their Pattern of Consumption Expenditures

Instead of having all of the students use the median income for their econo-
mic constraint as was done earlier, have the class organize into six small
groups representing different income levels as shown on Tables 1 and 5. 5
For example, one group might represent the lowest fifth of the nation's 42
families with incomes under $4,000 who together received about 5 percent of the total personal income in 1965. Another group could represent the top 5 percent of the nation's families with incomes above $20,000 who received about 15 percent of the nation's total income in 1965. (See Table 5). Other students might represent four income groups between these two extremes. By refering to Table 1 the students can determine the approximate income range of the fifth of the families he represents. For example, to determine the approximate income level for the lowest fifth of the nation's families, students using Table 1 should add the percentages beginning with the lowest income range upwards (income-wise) until they total approximately 20 percent (under $4,000). The second fifth will begin counting at approximately 20 percent continuing upward to approximately 40 percent ($4,000-$6,999) of the families. The range of the third fifth is 40 to 60 percent or ($7,000 to $8,999); the range of the fourth fifth is 60 to 80 percent or ($9,000 to $11,999); the highest fifth is 80 to 100 percent or ($12,000 - $24,999). The sixth group is the upper 5 percent ($20,000 and over). Here we count from the top down. Each student group except the top 5 percent represents 10,000,000 families or 20 percent of the total.

Each group should familiarize itself with the pattern of consumption expen-
diture for the income group it represents. This is found on Table 4. 41

For example, the group choosing to represent the lowest fifth will find on examining the data that families in this income group spend proportionally more on housing and food than any of the other income groups. On the other hand, expenditures for automobiles, education, recreation, and clothing loom large in the higher income brackets.

STEP II: Student Groups Compare Their Pattern of Expenditures With Each of the Other Groups and Account for Differences

After familiarizing themselves with their own group's expenditure pattern, each group should compare its pattern of expenditures with the other groups. The following questions are suggested for each of the groups to make a comparative examination of expenditure patterns.

BASIC UNDERSTANDING: HUMAN ECONOMIC WANTS DIFFER AMONG INCOME GROUPS AT ANY ONE TIME

1. COMPARE THE PERCENTAGE OF PERSONAL CONSUMPTION EXPENDITURE MADE FOR FOOD AMONG DIFFERENT INCOME GROUPS IN 1960-61.
2. COMPARE THE PERCENTAGE OF PERSONAL CONSUMPTION EXPENDITURE MADE FOR CLOTHING AMONG DIFFERENT INCOME GROUPS IN 1960-61.
3. HOW DO YOU EXPLAIN THE DIFFERENCES IN EXPENDITURES FOR FOOD AND CLOTHING BETWEEN HIGH AND LOW INCOME GROUPS?
4. WHAT CATEGORIES SHOW THE LARGEST AND SMALLEST PERCENTAGE DIFFERENCES BETWEEN HIGH AND LOW INCOME GROUPS?
5. IN WHAT WAYS DOES THE EXPENDITURE PATTERN OF THE INTERMEDIATE GROUPS DIFFER FROM THE LOWEST AND THE HIGHEST?

Once students perceive the differences in patterns of family expenditures among the six income groups, the next step is for students to attempt to explain WHY these differences exist. For example, the group representing the lowest fifth of the nation's families should try to explain to the other groups WHY they spend proportionally more on food, clothing, and shelter than other groups spend. Similarily, the higher and intermediate groups should explain WHY they spend proportionally more on other goods and services.

STEP III: Student Income Groups "Swap Places" and Consider Adjustments Required in Pattern of Consumption Expenditures

Now, have each group represent a different income class. For example, what adjustments would those who had previously represented the top 5 percent of the nation's families have to make in their expenditures if they were to suddenly "swap places" with the bottom 20 percent and visa versa? Students in the intermediate income groups can consider the kind of adjustments they would have to make if they were suddenly thrust into a higher or lower income group as shown in Tables 1, 4, and 5.

Table 5 indicates that the lowest fifth or 20 percent of the families had 5 percent of the nation's personal income. If the student group that had represented the lowest fifth were suddenly to represent the highest fifth, it would now have command over 41 percent of the nation's personal income. What impact would this have on the pattern of expenditures of the groups?

BASIC UNDERSTANDING: HUMAN ECONOMIC WANTS DIFFER AMONG INCOME GROUPS AT ANY ONE TIME

Note to Teacher The students should be given a free choice as to which one of the income groups they choose to represent since the principle of economic constraint is operative in all of the income groups.

In the preceding section that deals with the question of Why Human Wants Change Over Time, we saw that human wants are dynamic changing continuously and that they reflect changes in tastes, preferences, goals, and values of individuals and society. A major factor in explaining these changes is the improvement in the productive capacity of the economy over time.

Similarily, an increase in command over goods and services--shifting from the lower to highest income group--should result in a change in tastes, preferences, goals, and values. These changes will be reflected in part in the new patterns of expenditures and in the assumption of new roles such as saving. However, new tastes, preferences, and values made possible through more income are usually acquired slowly particularly if the individual enters a higher income group instead of enjoying increased income with his own socio-income group. For most products only in the longer run will expenditures reflect the new or modified tastes, preferences and values of the individual. The student should keep this time lag in mind when he "swaps" income groups with other members of the class.

Let us reverse the process so the students who previously represented the upper fifth and had command over 41 percent of the income now assume the role of the lower fifth who have command over 5 percent of the nation's personal income.

Twenty percent now have to "get by" on 5 percent instead of 41 percent.
Which expenditures will be curtailed and which roles abandoned? Table 1 5
shows that food and housing would now take two-thirds of the total budget as compared with 41 percent for the upper fifth. Considering the many other essential expenditures that must be maintained such as medical care (6.5 percent), the lower fifth would virtually abandon any attempts to save as is commonplace with the upper fifth. The class should discuss whether personal income is the only way people have to command goods and services especially in the lower fifth. Here we are concerned with transfer payments such as assistance to the needy, marginal farm families, veterans, senior citizens groups, school lunch programs, food stamps, and various tax advantages which some states make available to low income groups. These all result in command over goods and services not always reflected in personal income. Therefore, we have to modify the assertion that 20 percent of the families must "get by" with only 5 percent of the nation's personal income.

The intermediate groups may wish to exchange with the fifth immediately above them in terms of income since there is a constant upward movement of individuals on the income ladder.

I

BASIC UNDERSTANDING: HUMAN ECONOMIC WANTS DIFFER AMONG INCOME GROUPS AT ANY ONE TIME

STEP IV: Class Summary Discussion: How and Why Does Income Act as a Constraint and Influencer of Patterns of Consumption Expenditure by Income Levels?

What are the implications for the nation's 49,834,000 families and for the nation's economy?

The students should begin to see that in representing different income groups other than the median income, they reflect different preferences, tastes, goals and values that are directly related to the personal income level of the group. The different income levels that they represent in the class discussions act as constraints which allow them to have different quantities and kinds of goods and services much in the same way that the nation in different periods of time represents a different "mix" of tastes, preferences, goals, and values which its changing productive capacity makes possible. MORE INCOME = MORE CHOICES.

STEP V: Class and/or Small Group Examine the Median Income Data for Non-White Families and the Adjustments Made in Family Consumption Expenditures by Non-White Families in Their Region.

5 Table 1 also provides median income figures by race. The class may wish to examine the constraints on non-white family expenditures in their region. In this case the class should use the appropriate and lower median income figure. For example, the median income of Negro families in the North Central Region for the year 1968 is $6077 or about $1742 less than the median for white families. This difference constitutes a major constraint on the expenditures of Negro families and is more than what the average of all families spend on housing, the major expenditure, in the North Central Region.

WHAT MAJOR ADJUSTMENTS DO NEGRO FAMILIES MAKE IN THE PATTERN OF THEIR EXPENDITURES TO ACCOMMODATE THE LOWER MEDIAN INCOME?

Note to Teacher

The fact this is Step V in no way indicates that the consumption patterns of non-whites are less important than those of the majority group. The difficulty is that there is no detailed information on non-white expenditures. Therefore, the class will have to rely on information which it can collect from its own non-white students or other sources.

T-43

BASIC UNDERSTANDING: WANTS ARE DYNAMIC--CHANGING CONTINUOUSLY AND REFLECTING CHANGES IN THE TASTES, PREFERENCES, GOALS AND VALUES OF INDIVIDUALS AND A SOCIETY AS WELL AS THE PRODUCTIVE CAPACITY OF THE ECONOMY

CONCEPTS: economic goals and values, change

SKILLS: Identifying family, local community, national goals and values; Making inferences about family, local community, national goals and values from consumption expenditure data; Formulating a statement of goals for our nation's economy.

WHAT ARE OUR ECONOMIC GOALS?

Working with data in earlier assignments on family consumption expenditures, class family profile, the city's expenditures, and national consumption expenditures, students are asked here to determine what these expenditures suggest about our expectations of the nation's economy with the economic goals and values of our people. 43

As an orientation to prepare students to work with the several sets of consumption expenditure data, we suggest that you conduct a trial run using the data given below on two hypothetical families--the Brown and Smith families.

Categories	The Brown Family Percentage	The Smith Family Percentage
Food	20%	11%
Clothing	5	2
Shelter	36	25
Household Operation	5	7
Health	5	2
Education	2	5
Recreation and Travel	9	28
Personal Care	5	4
Donations	3	4
Savings	10	6
Other	10	6

BASIC UNDERSTANDING: WANTS ARE DYNAMIC--CHANGING CONTINUOUSLY AND REFLECTING CHANGES IN THE TASTES, PREFERENCES, GOALS AND VALUES OF INDIVIDUALS AND A SOCIETY AS WELL AS THE PRODUCTIVE CAPACITY OF THE ECONOMY

Given no additional information about these families such as number of family members, or income, we might make these inferences:

1. Housing is important to family (41% is spent for shelter and household operation)	1. This family places high value on recreation and travel (28%).
2. Making provision for the future is important to the Brown family (10% for saving.)	2. It appears that the Smiths deemphasize food in order to spend more on recreation and travel.

You may want to use these two hypothetical families to introduce students to work. Have students suggest inferences for each the Brown and Smith families.

Then have the students working individually with their own family expenditure categories in percentages prepare part 1.

This should be done as individual work without class discussion. However, you should check student preparation to assure that valid inferences are made from the data.

43 2. For a change of pace, have the students number off by five to set up small working groups. Each group will work with the class family profile following the procedure used above in formulating inferences. As a group, students should write the inferences in the space provided in the manual. Fifteen to twenty minutes ought to be sufficient for the groups to formulate a good set of inferences.

Then have a spokesman from one of the groups present the inferences prepared by his group. The other groups make additions or revisions.

43 3. Use small groups again but renumber so the group membership is rotated.

The same procedure can be followed for formulating inferences.

45 5. Having carried the students through these four sets of data in formulating inferences, they should now be able to formulate a statement of objectives (or those things) which they, as individuals and as members of families, as citizens of the local community, and of the nation want expect of our economy. Hence this writing assignment which may be prepared as an essay or as a set of specific objectives with appropriate explanation.

BASIC UNDERSTANDING: WANTS ARE DYNAMIC--CHANGING CONTINUOUSLY AND REFLECTING CHANGES IN THE TASTES, PREFERENCES, GOALS AND VALUES OF INDIVIDUALS AND A SOCIETY AS WELL AS THE PRODUCTIVE CAPACITY OF THE ECONOMY

4. Here we introduce economic goals, that is, what we as a people expect 44
of our economy and want it to do. The goals of the economy are ethical value judgments. At any time there exists a substantial consensus as to what goals are considered to be desirable. Historically, Americans have sought to maintain as much individual freedom as is possible and still achieve other goals. Individual initiative and self-interest are accepted as proper and desirable motives for economic behavior. Individuals are largely free to make a living in the occupation of their choice, to spend their money for the products and services they think will give them the greatest enjoyment, to live where they choose, and to use their property and personal abilities to their own best advantage. This strong preference for individual freedom is reflected in a method of economic organization that places major reliance on individual or consumer choices operating through a system of prices and markets as the central coordinating device. But, Americans have also placed high value on full employment, a rising standard of living, stable prices, economic growth, a wide diffusion of economic well-being, and a program of national defense adequate to preserve out way of life.

8. Have students reexamine Table 3 - Personal Consumption Expenditures 34
for 1950, 1960, 1967 after they have examined their family and city consumption expenditure data. What do these data suggest about our
expectations of the economy? Values? Change in values? 46

You may find the article "In Defense of Waste," Time Essay, Time, November 18, 1966, pp. 56-57 useful for your own information and to share with students. The position developed in the essay relates to consumption expenditures and our use of productive resources as related to goals and values.

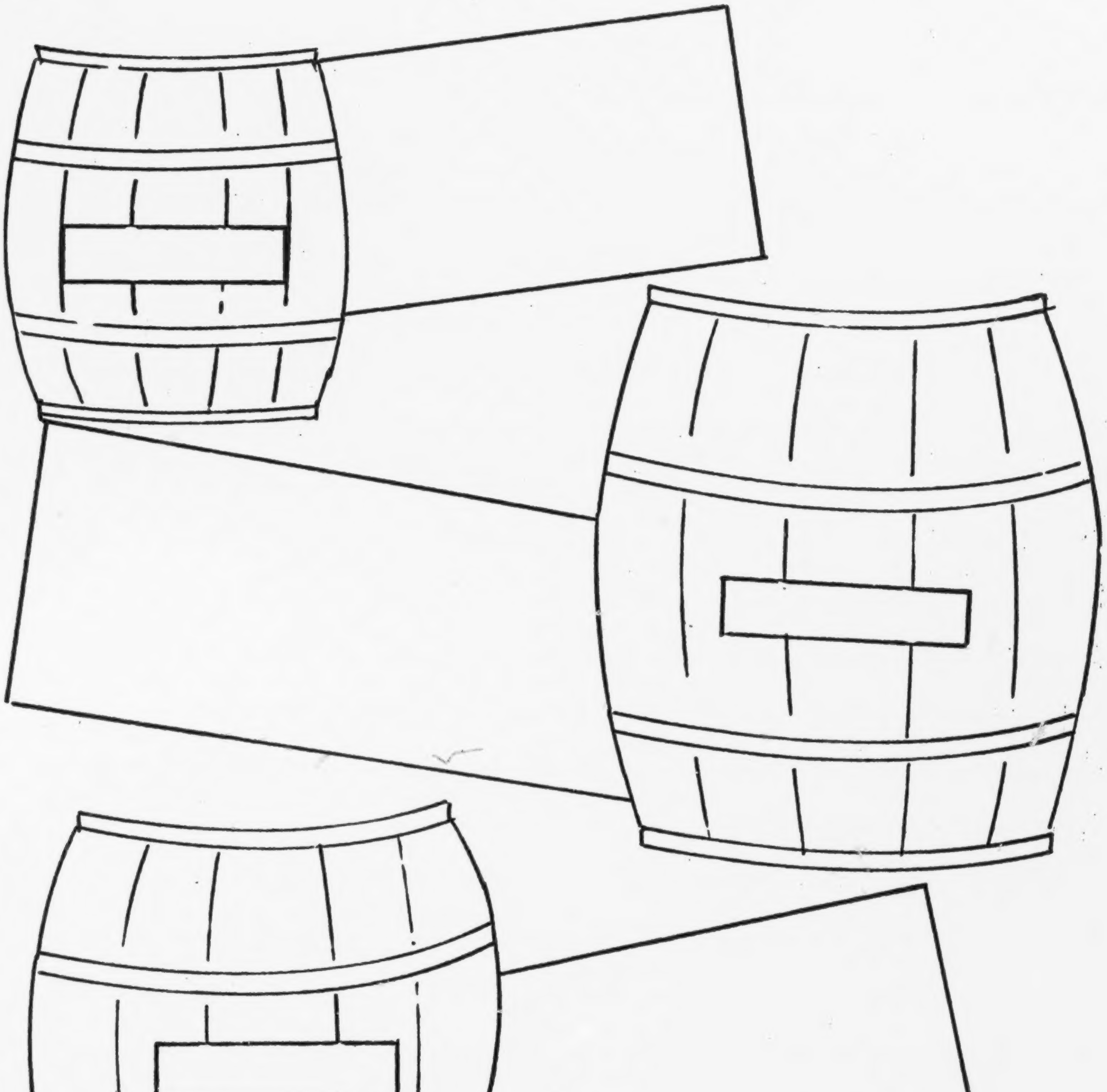
COURSE I -- MAN IN SOCIETY

UNIT II -- ECONOMICS: CHOICE MAKING

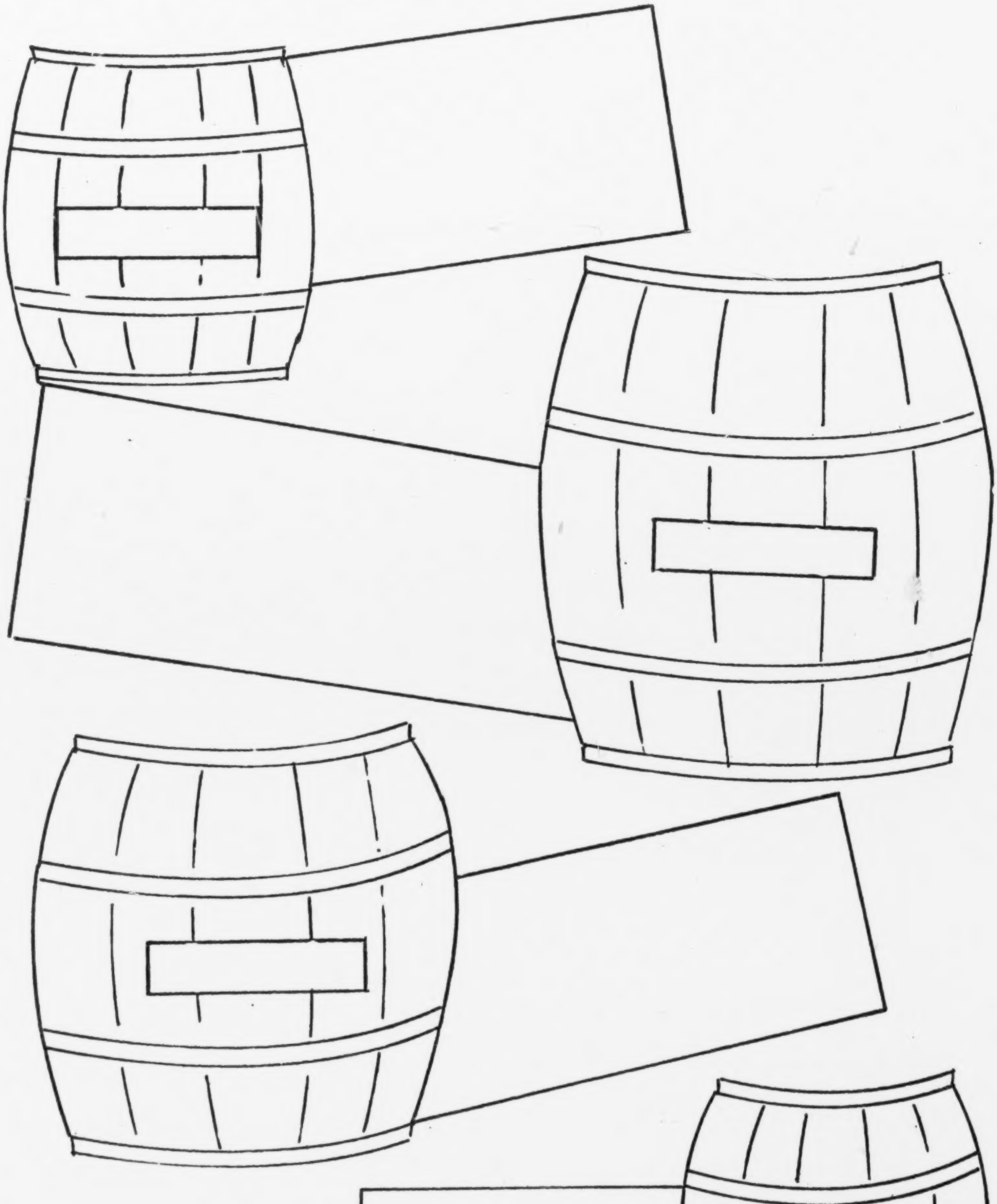
WHAT DOES THE FAMILY CONSUME?

1. In the spaces provided below, and on additional sheets as needed to complete your list, write all those things that required the expenditure of money to provide for your family during the current year, January first through December 30.

2. HOW DO WE CATEGORIZE OUR FAMILY'S EXPENDITURES?



2. HOW DO WE CATEGORIZE OUR FAMILY'S EXPENDITURES?



WHAT DOES THE FAMILY CONSUME?

3. Now that you have sorted out your long list of family purchases for the year, and "thrown" each one in one of the barrels, stand off and look at these barrels. What do you see? What questions come to mind? For example, you see that the barrels are of different sizes. "How come?" Are some of these barrels more important to the family than other barrels? How much is spent for the things you have "thrown' in each of these barrels?

3.1 Now, you add your questions:

3.2 What information do you need to answer these questions?

3.3 Where can you get accurate information?

3.4 Your teacher will give you Chart I and explain the preparation you will make for the next class session. The remainder of this page can be used to make notes that will help you prepare your assignment accurately and completely.

TABLE 1: FAMILY INCOME DISTRIBUTION OF UNITED STATES AND NORTH CENTRAL REGION BY TOTAL AND RACE FOR 1967 AND ESTIMATED FAMILY MEDIAN INCOME FOR 1968

Total money income	UNITED STATES				NORTH CENTRAL			
	Total	White	Nonwhite		Total	White	Nonwhite	
			Total	White			Total	White
Number Families thousands	49,834	44,814	5,020	4,589	14,099	13,084	1,015	983
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $1,000	2.0	1.7	4.7	5.0	1.5	1.5	2.7	2.7
$1,000 to $1,999	4.4	3.8	9.4	10.0	3.9	3.7	6.9	7.0
$2,000 to $2,999	5.9	5.2	12.8	13.5	5.4	5.1	9.7	9.8
$3,000 to $3,999	6.3	5.7	11.6	11.9	5.6	5.3	9.6	9.6
$4,000 to $4,999	6.5	6.1	10.1	10.4	5.9	5.8	7.7	7.8
$5,000 to $5,999	7.7	7.5	9.7	10.1	7.1	7.0	8.1	8.2
$6,000 to $6,999	8.3	8.3	8.0	8.0	8.5	8.4	9.3	9.5
$7,000 to $7,999	8.8	9.1	6.9	6.8	9.5	9.6	7.8	7.9
$8,000 to $8,999	8.3	8.6	5.8	5.4	8.9	9.0	8.1	8.2
$9,000 to $9,999	7.1	7.4	4.2	3.9	8.0	8.1	6.3	6.1
$10,000 to $11,999	11.9	12.5	6.5	6.1	12.8	13.0	10.6	10.9
$12,000 to $14,999	10.6	11.2	5.2	4.7	11.1	11.5	5.8	5.6
$15,000 to $24,999	9.7	10.3	4.2	3.5	9.6	9.9	6.0	5.1
$25,000 and over	2.5	2.6	0.9	0.6	2.1	2.2	1.6	1.4
Median income before taxes	$8,017	$8,318	$5,177	$4,939	$8,296	$8,414	$6,633	$6,540
Median income after taxes	7,095	7,361	4,582	4,371	7,342	7,446	5,870	5,788
Estimated Median Income for 1968								
before taxes	8,418	8,545	5,436	5,186	8,711	8,835	6,965	6,867
after taxes	7,450	7,562	4,811	4,590	7,709	7,819	6,164	6,077

Source: Current Population Report, Series P-60, No. 55, August 5, 1968. The median income figures after taxes for 1967 and before and after taxes for 1968 were estimated by SSCSC for use in the Family Consumption Expenditures Project. It assumes the same relative tax burden as in Table 1.

WHAT DETERMINES FAMILY CONSUMPTION EXPENDITURES?

3.5 Turn now to Chart I, columns one and two in which you have made dollar and percentage entries for each of the categories. At the bottom of column 3 write $7, 342 (North Central region median income). Use National median if you live outside the North Central Region). Proceed now to make the revisions that you would need to make in your family's purchases for the current year given the chosen median family income and no more. Enter the expenditure figures in dollars ($) for each category in column 3. Then compute the percentages for each category and write in column 4.

Now you should be ready to work with the new data in columns 3 and 4 on Chart I to prepare your answers to these questions:

(a) What decisions did you have to make in preparing your entries for column 3?

(b) Of the categories changed, which ones did you reduce most in $ expenditure?

(c) How did you arrive at these reductions?

(d) Suppose prices changed significantly. That is, assume prices of milk, meat, clothing, transportation, recreation, etc., increased sharply in relation to the prices of other goods and services? How would this affect your answers to (a), (b), (c)?

(e) Suppose prices dropped sharply. What difference would this make in your decisions on the above questions?

WHAT DETERMINES FAMILY CONSUMPTION EXPENDITURES?

(f) Of the categories changed, which were changed least in $ expenditure?

(g) How did you arrive at these decisions?

(h) Suppose prices changed significantly for the goods and services in the categories in (f). What difference would this make in your answer to: (a), (f), (g).

prices increased:

prices dropped:

(i) What will be the consequences for your family of the revisions you have made in consumption expenditures based on the national median income figure?

(j) What statements can you make about what determines family consumption expenditures?

3.6 Turn to Chart I, and examine the percentages you have computed and entered in column 4 to answer the following questions:

What categories are the largest percentage of total expenditure? List with percentage

Category	%

What categories are the smallest percentage of total expenditure? List with percentage

Category	%

Compare these categories in column 4 with categories in column 2 that have the highest and lowest percentage of total expenditure. What do you find?

____

____

____

What explanation can you give for the change you find in these two sets of percentages of total family consumption expenditures?

____

____

____

____

HOW DOES OUR CLASS PROFILE COMPARE WITH CONSUMER EXPENDITURES FOR USA? FOR NORTH CENTRAL REGION?

4. Your teacher will give you Table 2: Consumer Expenditures and Income - Urban United States, 1960-61- Urban North Central Region, 1960-61, which presents data on family consumption expenditures collected by the Bureau of Labor Statistics, United States Department of Labor. You have just completed collecting, organizing and developing two sets of data which you have entered on Chart I and Chart II in your manual.

   Now we'll lay these sets of data side by side and look for similarities and differences. Space is provided below for you to make your entries in response to each of the questions. Study the sets you are asked to examine and try to "wring" as much as you can out of these data.

   4.1 Lay your Chart II next to the data on Table 2. Look for similarities and differences in these two sets of data and write your findings below.

   Similarities:

   Differences:

   4.2 Lay your Chart I next to the data on Table 2. What similarities and differences do you find?

   Similarities:

   Differences:

HOW DOES OUR CLASS PROFILE COMPARE WITH CONSUMER EXPENDITURES FOR USA? FOR NORTH CENTRAL REGION?

4.3 Compare the data on Table 2 for Urban North Central Region with that of Urban United States. What do you find by way of similarities and differences in these data?

Similarities:

Differences:

4.4 What do you conclude about family consumption expenditures from these four sets of data? (Be sure the data support your conclusion).

4.5 What is the outlook for the trend of consumer expenditure in your life time? Can you venture a prediction? Check your prediction against the reading, "USA: A Nation of Consumers."

HOW DOES OUR CLASS PROFILE COMPARE WITH CONSUMER EXPENDITURES FOR USA?

USA: A NATION OF CONSUMERS

A consumer is any one who uses goods or services. In one way or another, each one of us is a consumer. Johnny who rushes with the dime his mother gave him to buy a candy bar at the super market is just as much a part of the consumer category as the teen-ager who delivers newspapers to earn money for his baseball glove or the college girl who uses her allowance to purchase her favorite hi-fi recording or the father who spends most of his pay check to provide the family with food, clothing, a home, medical care, transportation and recreation.

The consumer market is an enormous one and a truly powerful force in the nation's economy. How large is this market? It is as large as the total population of our country. Hour by hour, minute by minute, a clock in the lobby of the Department of Commerce Building in Washington, D. C., ticks away--not to keep time--but to maintain a continuous tabulation of the nation's estimated population. The census clock is really ticking out the economic future of America. On November 20, 1967, at about 11 a.m. the United States reached a milestone achieved by only three other nations in history--a population of 200 million registered by the automatic population counter.

This new population milestone is of enormous significance for the American economy, present and future. Since 1920, the population has grown by almost 75,000,000 persons, a truly fantastic rate of increase. Since 1950, the increase has been almost 30,000,000. Now in 1967 the population has reached 200,000,000. persons.

The very size of our population shows clearly that the market for consumer goods is a large one, indeed. Each and every person--from the infant to the grandparent--has certain food, clothing, housing and other needs that must be filled. Within the next two decades the consumer market is expected to show a very sizeable growth. Important now, it will be an even more significant factor in keeping our economy strong in the years ahead.

WHAT DOES OUR CITY CONSUME? WHAT DOES OUR LOCAL SCHOOL DISTRICT CONSUME?

5. Your teacher will plan with your class to select either your city government or local school district to compile a list of all those things that require the expenditure of money to operate your city or school during the current year. You will think of many things immediately. Write them in the spaces below. There are other expenditures that you may not know about. Consult your parents before the next class session and add those to your list placing a check (√) in front of those entries that were suggested to you by your parents or other adults. Try to include in your list most of the things that required the expenditure of money to operate your city or school this current year.

____________ ____________ ____________

____________ ____________ ____________

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(make additions on other page in your notebook if you need more space)

HAT DOES OUR CITY CONSUME? WHAT DOES OUR LOCAL SCHOOL DISTRICT ONSUME?

5.1 Turn to the entries you made on page 1 for your family's consumption expenditures for the current year.

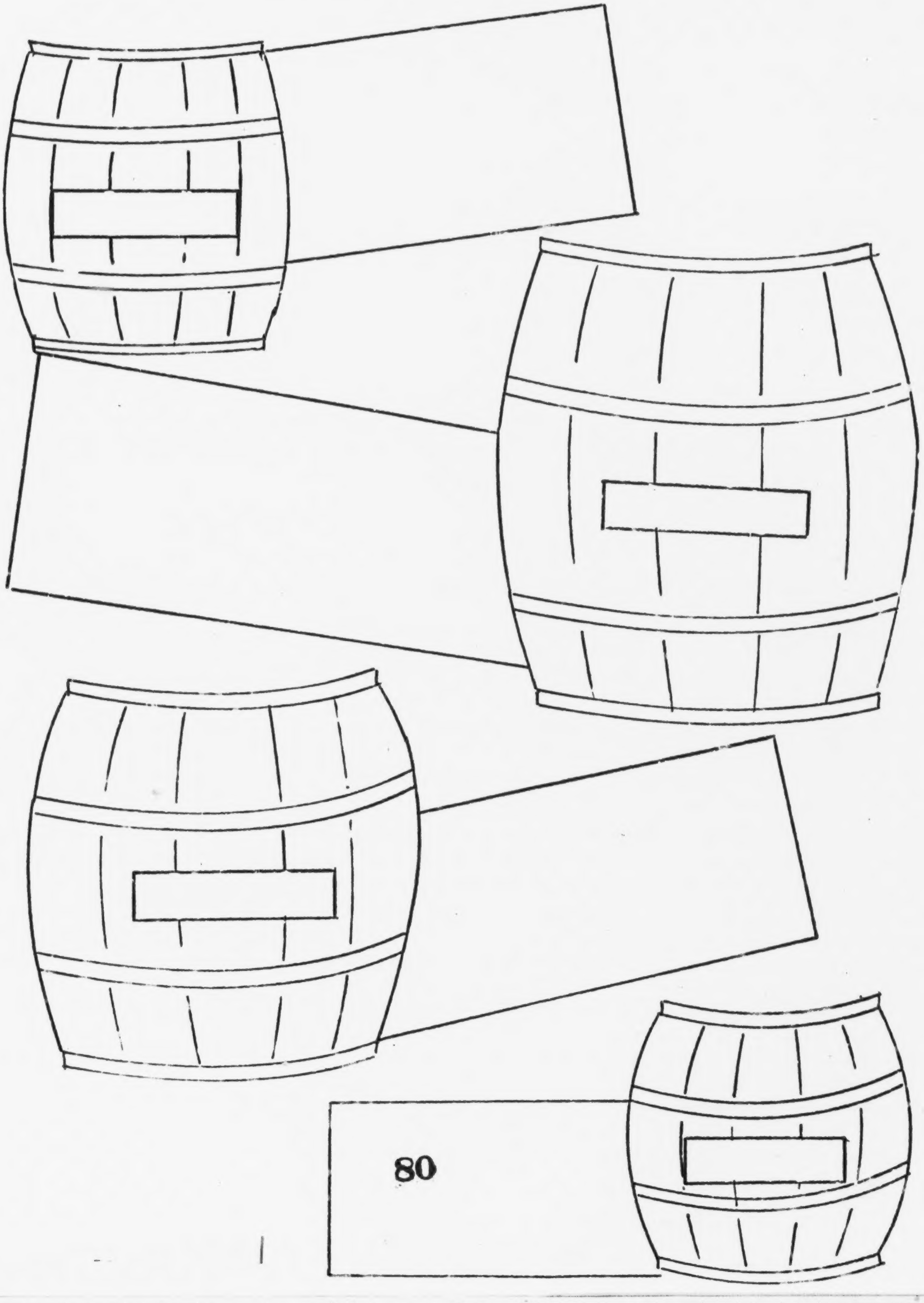
WHAT DIFFERENCES ARE THERE BETWEEN THOSE ITEMS AND THE ENTRIES YOU HAVE MADE ON PAGE 12.

5.2 WHAT REASONS CAN YOU GIVE FOR THE DIFFERENCES IN THE ENTRIES ON YOUR TWO LISTS?

5.3 As families consume more of the goods and services you have assigned to the barrels (see your pages 2 and 3), how will this affect the consumption of goods and services produced by your city? (see your pages 14 and 15).

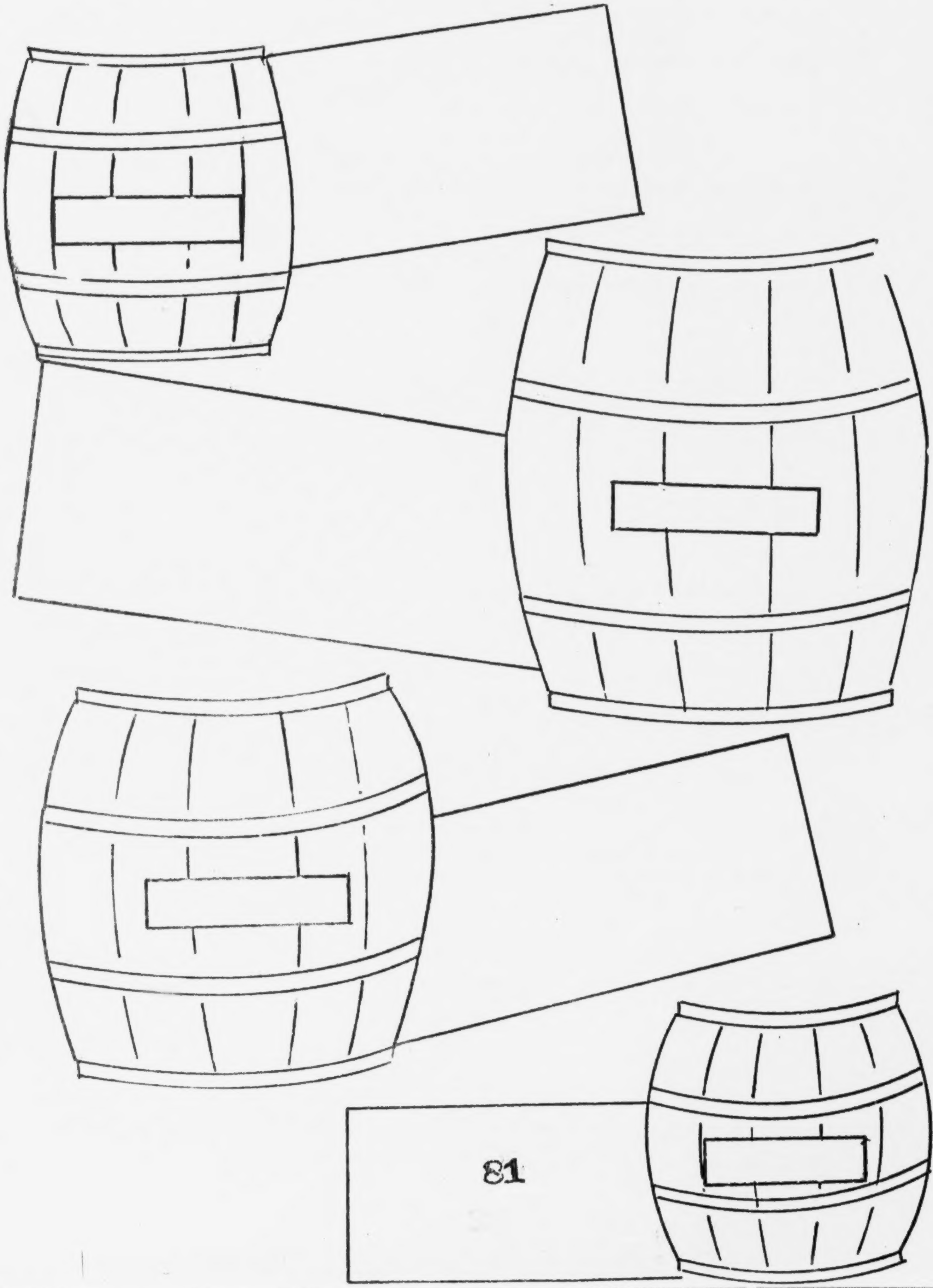
HOW DO WE CATEGORIZE OUR CITY'S EXPENDITURES?

5.4 Categorize the expenditures you have identified in the list for your city using the barrels provided here. Be sure to write your criteria in the appropriate space for each category and label each barrel.



HOW DO WE CATEGORIZE OUR CITY'S EXPENDITURES?

5. 4 (continued)



WHAT DETERMINES OUR CONSUMPTION OF HIGHER EDUCATION?

1. Turn to Charts A and B on the next page. After you have studied these two charts, try to answer each of the following questions writing your answers in the spaces provided.

   1.1 How many students attended colleges in Illinois in 1963? ________

   1.2 How many students in Illinois are expected to attend colleges in Illinois in: 1970 ________ 1980 ________

   1.3 How many students were enrolled at the University of Illinois in:

   1963 ________ 1965 ________

   1.4 How many students are expected to attend the University of Illinois in:

   1970 ________ 1975 ________ 1980 ________

   1.5 On the basis of the data provided on Charts A and B what will happen to college enrollments (in all institutions--private and public) in Illinois between 1963 and 1980?

   ____

   ____

2. What will happen to enrollment at the University of Illinois between 1963 and 1980?

   ____

   ____

THE UNIVERSITY AND PLANS FOR THE FUTURE

At the December 16, 1964, meeting of the University of Illinois Board of Trustees a special report on "The University of Illinois and Plans for the Future" was presented. Selected portions of this report follow.

> "The opportunity to study in institutions of higher education should be available to all young people who may reasonably be expected to benefit from such study."[1]

---

[1] Policy statement adopted by the Illinois Board of Higher Education in October, 1962, and quoted in "A Master Plan for Higher Education in Illinois," July, 1964, page 6.

Chart A

PROJECTED ENROLLMENT DEMANDS FOR ILLINOIS AND CHICAGO

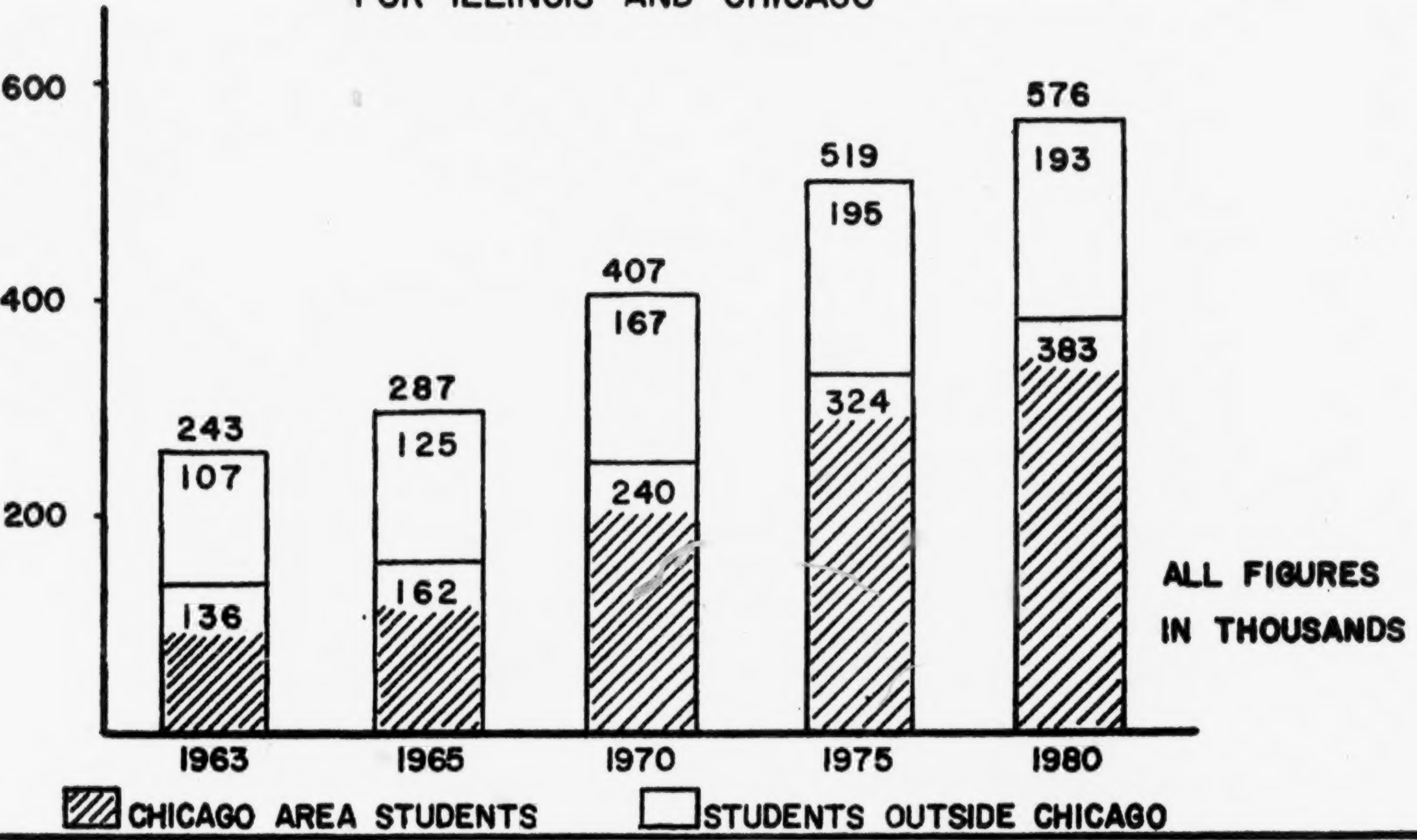
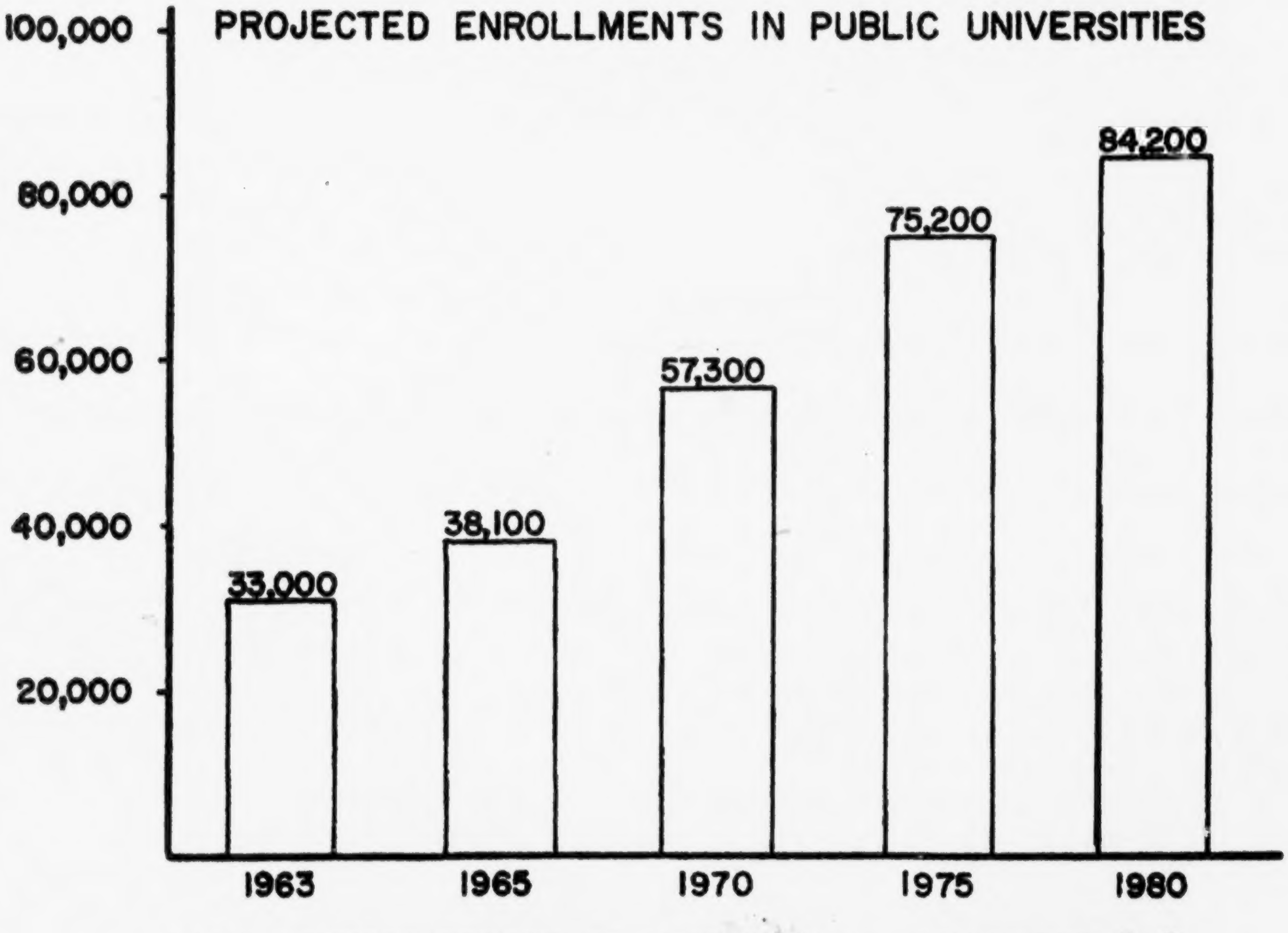


Chart B

UNIVERSITY OF ILLINOIS' PROPORTIONATE SHARE OF PROJECTED ENROLLMENTS IN PUBLIC UNIVERSITIES



BASIC SOURCE: REPORT OF MASTER PLAN COMMITTEE "A"

WHAT DETERMINES OUR CONSUMPTION OF HIGHER EDUCATION?

> "Illinois must provide opportunity for higher education to all of its youth who have the preparation, ability and serious intent to proceed beyond high school."[1]
>
> "The University of Illinois is a great resource for Illinois and its people and for the Nation. It is the hope of all who are involved in the University's work that the plans for the future will take full advantage of its present strength and its potentialities for the unusual opportunities that lie ahead."[2]
>
> "In September, 1963, 128 qualified applicants were denied admission to the University of Illinois. In September, 1964, 5,119 qualified students were denied admission at the Urbana-Champaign Campus and the Chicago Undergraduate Division. These were qualified students, not the many thousands more who applied but were judged on their records as not sufficiently qualified. For September 1965, the University of Illinois is scheduling places for 3,000 more students at Chicago Circle and for 1,000 more at Urbana. However, it is conservatively estimated that the University still will be obliged to turn away 7,500 qualified students from the Chicago Circle and Urbana-Champaign campuses."[3]

3. Now that you have read this excerpt from the report, what does the report tell you about the objectives and aims of the University and the Board of Higher Education?

4. On the basis of the information provided in the reading, did the University achieve its goals in the period 1963-65? Give reasons for your answer?

---

1. "Educational Directions at the University of Illinois," a statement by the University Study Committee on Future Programs, January 1963.
2. "Goals and Functions of the University of Illinois," a report submitted to the Illinois Board of Higher Education by David D. Henry, President of the University, December 5, 1963.
3. David D. Henry, President, University of Illinois. "The State of the University, 1964-65. Faculty Letter, No. 90, January 18, 1965.

WHAT DETERMINES OUR CONSUMPTION OF HIGHER EDUCATION?

5. Looking ahead to the period of 1965-1980, what do these years hold for the University? What evidence can you give from the data on Charts A and B to support your position?

____

____

____

6. What will it take to achieve the aims and objectives of the University in the period, 1965-80?

________________ ________________ ________________

________________ ________________ ________________

________________ ________________ ________________

7. Compare and contrast your entries above with the entries you made in your Family Expenditure Listing, page 1.

What similarities do you find?

____

____

____

What differences do you find?

____

____

____

8. As your family and all other families consume more educational services produced by the State University and Colleges, how will this affect the consumption of goods and services produced in the private sector of the nation's economy? Be prepared to discuss with examples.

WHAT ARE THE ECONOMIC WANTS OF APPALACHIA?

1. Read "Appalachia: Challenge to Poverty" and "The Appalachian Volunteers."

   In your own words state the problem presented in these readings. What facts support the problem? Statement of Problem:

   The Facts:

2. What economic wants do you identify? Check your list with the reading, "Sometimes It's Statistical, But Poverty is People" and with additional articles your teacher suggests or that you find in current periodicals. (Consult the Readers Guide to Current Periodical Literature.)

WHAT ARE THE ECONOMIC WANTS OF APPALACHIA?

3. Which categories of wants loom large in these readings?

4. Why do these particular categories of economic wants loom large? Give reasons and prepare to discuss in class.

5. Compare these categories (No. 3 above) with the categories on your Class Family Consumption Expenditure Profile. What do you find? What reasons can you give for what you find?

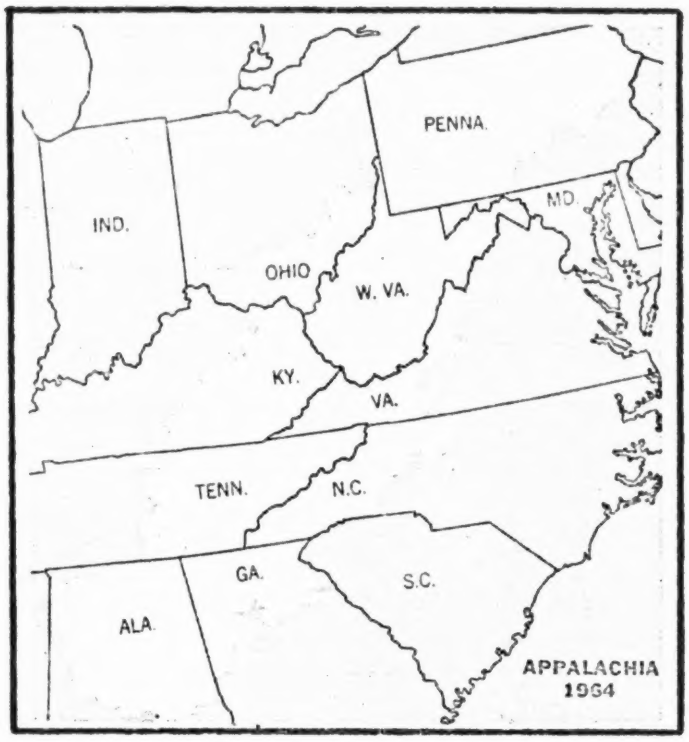
6. Compare the consumption expenditures of your city or school district with the goods and services needed in the regional areas described in the readings.

[redacted]

WHAT ARE THE ECONOMIC WANTS OF APPALACHIA ?

My Recommended Program of Action.

APPALACHIA: CHALLENGE TO POVERTY



Appalachia--beginning in northern
ennsylvania and running southwestardly
ong the ridges, valleys, and rivers of
Appalachian Range through 10 states
northern Alabama--has long been
cognized as a problem region in the
tion's economy. Bound together by its
gged terrain and sharing a common
source base, Appalachia has lagged be-
nd the rest of the nation. Many of the
ople caught by these unfavorable econo-
c trends sank to a shocking level of
verty. Two million people left the
gion between 1950 and 1960.

Coal is the region's principal natural
source. Appalachia produces two-
rds of the Nation's coal and its pros-
rity has depended on "King Coal."
al has been a sick industry for most of the last 40 years. Coal has been sup-
nted in many energy uses by other fuels. Also, in the past ten years, mechani-
tion and automation have revolutionized coal mining. Thus the combination of
clining demand and technological change has spelled economic trouble, almost
onomic disaster, to this region.

Many of the people of Appalachia, caught by these unfavorable trends, sank
a shocking level of poverty. In every category of human welfare our fellow-
izens in Appalachia are below and some are well below desirable national
ndards. In health, in employment, in education, in the level of community
rvices, in transportation, in farm technology and in sanitation, community
er community and county after county struggle against inadequacies.

While the region is classified as predominately rural by census definition,
has never been a major agricultural region. Its problems arise mainly from
decline in employment in leading nonagricultural industries--principally coal
and its cures lie in the development of recreation and manufacturing industries,
cluding industries based on the region's timber resources.

The most hopeful trend is a widespread acceptance of the idea that the
eatest resource of the area is its people and that this resource is capable of
limited development.

WHAT IS THE NATURE OF ECONOMIC WANTS?

Your teacher will explain this assignment and provide you with the questions you will need to work with several new pieces of data. Space is provided for the first few questions. Continue on with your own paper and number the next page 30a; if you need additional space.

1.1 ______________________________

____

1.2 ______________________________

____

____

____

1.3 ______________________________

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____

____

____

____

2.1 ______________________________

____

2.2 ______________________________

____

2.3 ______________________________

____

2.4 ______________________________

____

____

____

Table 3 - PERSONAL CONSUMPTION EXPENDITURES BY TYPE OF PRODUCT

	(Percentage)		
	1950	1960	1967
FOOD AND BEVERAGES	29.0%	24.2%	22.3
TOBACCO PRODUCTS	2.3	2.2	1.9
CLOTHING, accessories, jewelry	12.2	10.3	10.3
PERSONAL CARE	1.3	1.6	1.7
HOUSING	11.6	13.0	14.4
HOUSEHOLD OPERATION[1]	14.9	14.0	14.2
MEDICAL CARE and DEATH[2]	5.0	6.4	6.9
PERSONAL BUSINESS[3]	4.1	6.2	5.4
TRANSPORTATION[4]	11.1	12.5	12.9
RECREATION[5]	5.8	6.0	6.2
EDUCATION	.9	1.3	1.6
RELIGIOUS and WELFARE ACTIVITIES	1.2	1.4	1.4
FOREIGN TRAVEL	.6	.9	.8
TOTAL PERSONAL CONSUMPTION EXPENDITURES	100.0%	100.0%	100.0%

. . . . . .

SOURCE: Historical Statistics, 1950; Historical Statistics. . . . Continuation to 1962; Survey of Current Business, July 1968.

---

1. Furniture, kitchen and other household appliances, china, glassware, tableware and utensils, cleaning and polishing supplies and paper products, telephone and telegraph, electricity, gas, water, domestic service.
2. Drug preparations, ophthalmic products and orthopedic appliances, physicians, dentists, other professional services, health insurance.
3. Brokerage charges and investment counseling, bank service charges, trust services, and safe-deposit box rentals, legal services, funeral and burial expenses, interest on personal debt.
4. New cars and net purchases of used cars, tires, tubes, accessories, parts; gasoline and oil; bridge, ferry, tunnel, tolls; auto insurance; taxicab, railway, local bus, airline.
5. Books and maps; magazines, newspapers and sheet music; non-durable toys and sport supplies; radio and television receivers, records and musical instruments; radio and television repair; flower seeds, and potted plants; theater, opera, spectator sports; clubs and fraternal organizations, pari-mutual net receipts.

HY DO HUMAN ECONOMIC WANTS CHANGE OVER TIME?

our teacher will explain this assignment which will include the development and e of two sets of data. Make your entries, as explained by your teacher, in the ace indicated below.

LIST I	LIST II

Your preparation on the questions and generalizations that your teacher will explain should be entered on your own paper and inserted in your manual following this page.

WHY DO HUMAN ECONOMIC WANTS CHANGE OVER TIME?

HOW THE SETTLERS IN PLYMOUTH COLONY SATISFIED THESE ECONOMIC WANTS

FOOD

TRANSPORTATION

SHELTER

EDUCATION

CLOTHING

RECREATION

HEALTH

WHY DO HUMAN ECONOMIC WANTS CHANGE OVER TIME?

HOW AMERICANS TODAY SATISFY THESE ECONOMIC WANTS

FOOD

TRANSPORTATION

SHELTER

EDUCATION

CLOTHING

RECREATION

HEALTH

TABLE 4: SUMMARY OF FAMILY EXPENDITURES, INCOME, AND SAVINGS, BY INCOME CLASS
ALL URBAN FAMILIES AND SINGLE CONSUMERS – NORTH CENTRAL 1960-61

	Total	MONEY INCOME AFTER TAXES									
		Under $1,000	$1,000 to $1,999	$2,000 to $2,999	$3,000 to $3,999	$4,000 to $4,999	$5,000 to $5,999	$6,000 to $7,499	$7,500 to $9,999	$10,000 to $14,999	$15,000 and over
		PERCENT OF TOTAL EXPENDITURES									
Expenditures for Current Consumption	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food, Total	24.0	25.2	28.9	27.8	26.4	24.7	25.2	23.8	23.1	22.1	18.7
Food Prepared at Home	19.2	19.3	24.4	21.9	21.3	19.9	21.3	19.7	18.3	16.3	13.1
Food Away from Home	4.8	6.0	4.5	5.9	5.1	4.7	4.0	4.1	4.8	5.8	5.6
Tobacco	1.7	1.4	1.6	2.0	2.0	2.0	1.9	1.9	1.7	1.4	1.1
Alcoholic Beverages	1.7	.6	1.5	1.3	1.6	1.8	1.5	1.9	1.9	1.8	1.5
Housing, Total	29.6	43.1	39.2	34.3	32.7	30.1	29.5	30.5	27.7	26.8	25.9
Shelter	14.1	25.6	22.1	19.7	17.3	14.8	14.7	14.0	12.5	11.3	10.3
Rented Dwelling	5.8	14.4	15.0	13.1	11.5	8.4	7.2	4.3	3.4	2.3	.5
Owned Dwelling	7.6	10.4	7.0	6.3	5.5	6.0	7.1	9.0	8.5	7.9	7.7
Other Shelter	.6	.8	.2	.3	.3	.4	.4	.6	.6	1.0	2.1
Fuel, Light, Refrigeration, Water	4.8	8.6	8.0	5.9	5.3	4.9	4.9	5.0	4.5	4.0	3.5
Household Operations	5.5	6.6	6.0	5.4	5.8	5.5	5.1	5.6	5.2	5.5	7.3
Housefurnishings and Equipment	5.2	2.3	3.0	3.3	4.2	4.9	4.8	6.0	5.5	6.0	4.7
Clothing, Clothing Materials, Services	10.2	3.7	5.4	7.7	8.3	9.0	9.5	9.8	11.3	12.4	13.9
Personal Care	2.8	2.3	2.8	3.0	3.1	2.9	2.8	2.8	2.9	2.8	2.4
Medical Care	6.5	11.4	9.3	7.7	7.3	6.5	6.4	6.2	6.4	5.6	6.3
Recreation	4.1	2.4	1.7	2.9	2.9	3.6	4.0	4.0	4.6	5.0	4.7
Reading	.9	1.1	1.2	1.1	.9	.9	1.0	1.0	.9	1.0	.8
Education	1.1	.9	.2	.6	.6	.6	.9	.8	1.0	1.7	4.2
Transportation	15.2	3.3	4.8	9.2	12.5	16.6	15.7	15.4	16.5	17.3	15.1
Automobile	13.7	1.7	3.4	7.1	10.7	15.2	14.6	14.1	15.1	15.3	12.9
Other Travel and Transportation	1.5	1.7	1.4	2.1	1.8	1.4	1.1	1.3	1.4	2.0	2.2
Other Expenditures	2.1	4.5	3.3	2.3	1.6	1.4	1.7	2.0	2.0	2.1	5.4

Source: Bureau of Labor Statistics Report No. 237-35, May 1964.

HUMAN ECONOMIC WANTS DIFFER AMONG INCOME GROUPS AT ANY ONE TIME

TABLE 5: PERCENTAGE DISTRIBUTION OF FAMILY PERSONAL INCOME RECEIVED BY EACH FIFTH AND TOP 5 PERCENT OF ALL FAMILIES IN THE UNITED STATES, 1935-1965

Item and Income Rank	1935-6	1941	1944	1947	1950	1955	1958	1960	1963	1964	1965
FAMILIES											
Total	100	100	100	100	100	100	100	100	100	100	100
Lowest fifth	4	5	6	5	4	5	5	5	5	5	5
Second fifth.......	9	10	12	12	12	12	12	12	12	12	12
Middle fifth.......	14	16	16	17	17	18	18	18	17	18	18
Fourth fifth.......	21	22	22	23	24	23	24	23	24	24	24
Highest fifth	52	48	44	43	43	42	41	42	42	41	41
Top 5 percent.....	27	24	20	18	17	17	16	17	16	15	15

Source: Years 1947-1965 from Statistical Abstract of United States. Years 1935-1944 from Herman P. Miller, Income Distribution in the United States (a 1960 Census Monograph) U. S. Dept. of Commerce, 1966, p. 3.

WHAT ARE OUR ECONOMIC GOALS?

1. Turn to Chart I, page 4a, in this manual for data on your family's consumption expenditures. Study the data that you entered in the first two columns on Chart I. What inferences can you make from these data about what your family considers to be important. Write your inferences in the spaces provided immediately below.

   INFERENCES: ________________________________

   ____

   ____

2. Turn now to your class profile of family consumption expenditures that the members of your class developed.

   Working in small groups as directed by your teacher, study this class profile and the categories you developed from it and formulate inferences from these data. In the space below, write the inferences that you and the members of your group develop.

   INFERENCES: ________________________________

   ____

   ____

3. Turn now to the set of data you prepared on Your City's Expenditures, pages 14 and 15. What inferences can you make from these data? Write the inferences you and the members of your small working group formulate in the space below.

   INFERENCES: ________________________________

   ____

   ____

   ____

4. What do your entries for No. 1, 2, 3 suggest about the things you and your family considers to be important?

5. What common objective do you find in the above listing of the more familiar economic objectives of American people?

____

____

6. What conflicts in goals can you identify? Why do you think these are examples of goal conflict?

____

____

____

____

____

7. Refer to the entries you have made to Nos. 1, 2, 3. What common objective or goal can you find in your Family and City Consumption Expenditure Profiles? What conflicts in goals do you find? Why is there conflict among these goals?

____

____

____

WHAT GENERALIZATIONS CAN WE MAKE ABOUT ECONOMIC WANTS?

Having developed and analyzed a variety of data on goods and services to satisfy economic wants of the family, city, state, and a large regional area in our nation, you should be able now to formulate generalizations about human economic wants. Prepare these carefully and for each well worded generalization, give evidence from your study.

Generalization: ______

Evidence: ______

Generalization: ______

Evidence: ______

Generalization: ______

Evidence: ______

Generalization: ______

Evidence: ______

Generalization: ______

Evidence: ______

Generalization: ______

Evidence: ______

Generalization: ______

Evidence: ______

WHAT GOES INTO THE PRODUCTION OF GOODS AND SERVICES?

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THE ECONOMY'S PRODUCTIVE RESOURCES

BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

Here we are concerned with ECONOMIC RESOURCES without which human material wants could not be satisfied.

ECONOMIC RESOURCES as used in these instructional materials include (1) natural resources, (2) human resources and (3) capital equipment that are used in the production of goods and services.

The nation's current production of automobiles to satisfy our transportation wants will serve to illustrate the meaning of economic resources. Currently the American automobile industry employs 890,000 workers directly engaged in the production of cars and, in addition, supports employment in a great many other industries, i. e., steel, transportation, retail-sales, banking-finance, and advertising. To produce the present output of approximately 9 million cars, the automobile industry consumes 20% of the nation's steel, 14% of the nickel and aluminum, 13% of the copper, 30% of the zinc, and 80% of the rubber output as well as a steadily increasing percentage of plastic, cotton, and glass. Behind these statistics stands a vast array of resources in land, minerals, timber, sources of energy, factory and farm buildings, tools and machines, schools and colleges, research laboratories, transportation and communication facilities, and the insight, skill and knowledge of the workers who contribute directly or indirectly to the production of 9 million automobiles.

These, then, are the productive resources of a nation and for convenience we classify and refer to them in these materials as:

Natural Resources: all those things in nature that owe little to man's effort, 49-
i. e., land, forests, water, minerals, sources of energy (coal, water, 118
natural gas, petroleum). These are also classified as renewable and non-renewable or exhaustible.

Human Resources: the physical and mental talents that go into the production 119-
of goods and services. Things in nature become resources with economic 166
value when man displays the insight, knowledge, and skill to use them in ways to create goods and services. The iron ore in the Mesabi Range did not exist as a resource until the Iron Men of the nineteenth century mixed their skill and knowledge with it to create uses for iron ore, thereby giving this natural resource economic value. An essential and primary resource, then, is man's knowledge and skill--the level of technology that he possesses and can employ in determining the alternative uses that can be made of the nation's natural resources. In this sense human resources represent the catalyst hence the importance given in these materials to the nation's population, labor force, and the composition of the labor force in terms of age, sex, education, occupational distribution, and mobility.

T-2

BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

Management or the entrepreneur as risk taker, innovator, decision maker and the organizer of productive resources is a special human resource in a market economy.

Here, however, human resources include both labor and the entrepreneur as the critical factors of production operating in a given environment of technology, natural resources, capital equipment and effective demand.

167-204 Capital Equipment: the tools, machines, farm and factory buildings, stores, warehouses, transportation, communication, and power facilities, mines, schools and colleges are the products of a nation's human and natural resources that provide the means by which goods and services are produced to satisfy private and public wants. Capital, as used here, is not restricted to mean only new tools, machines, plants and inventory.

In producing capital equipment, man refrains from using limited natural and human resources to produce goods and services for consumption in the present. By going without or postponing consumption, a nation foregoes consumption in the present to add to its stock of real wealth in the form of capital equipment thereby increasing its capability to produce more goods and services in the future. If a nation uses its scientists and engineers to design missiles and space ships, it cannot use them to conduct research in urban planning, rapid transportation, and education. Steel used to build automobiles cannot be used to build automated factories and physical plants for schools and colleges.

A word of caution is in order. Some students may view money as capital. Used in this sense they mean money capital. Money, a claim on the economy for goods and services, can be "made good" in our own and other modern developed economies by exchanging it readily for real capital in the form of tools, machines, a factory building, transportation and communication facilities. The point is that money as such is not an economic resource. It is useful only to the extent that goods and services have been produced and are available for which it can be exchanged.

Nations differ in the kind, quantity and quality of their natural, human and capital resources, but no nation possesses unlimited resources. Among nations the United States and the Soviet Union have an abundance of natural resources, but even these have limits. Furthermore, scarcity of any natural resource cannot be solved in the same way that we satisfy our desire for food, clothing, housing or transportation. Our own and all other nations must make the best possible use of what they have in land, water, timber, minerals, and sources of energy.

Although the number of workers depends on the size of population and the number of persons who enter the labor force, all nations, including India, have a limited supply of human resources relative to human wants. One has only to think of the critical shortage of skilled workers, managerial and professional personnel in India and in all other developing nations that present formidable obstacles to economic development. In

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BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

the United States with a labor force approaching 75 million, a current economic problem is the shortage of workers qualified to "mesh in" with the jobs required to operate the machines that come with advancing technology.

Another important characteristic of resources is that they can be used in different ways. Land can be used to raise soybeans, wheat, forage crops to feed livestock, for a factory site, a housing development or a highway. Steel can be used to build automobiles, missiles, household appliances, or tools and automated machines. Labor can be used to build highways, factory buildings, houses, military hardware or school buildings. Resources used to produce consumer durables are not available to build, equip and staff new schools and colleges.

Limited resources can be combined in different proportions to produce goods and services. For example, a highway can be built using large numbers of workers and little capital equipment. Food can be produced using large inputs of land and capital equipment in contrast to using small tracts of land, little capital equipment and large inputs of human labor.

Not only can limited resources be used in different ways but human wants can be satisfied in different ways. Hunger can be satisfied with a bowl of rice, a hamburger, or a t-bone steak, but substituting a bowl of rice for a hamburger or a steak is not a perfect substitute.

Or, capital equipment is not a perfect substitute for human resources. If it were producers would not need to make choices as to what resources to use and in what proportion, and households (consumers) would not need to make choices in making their resources (labor, land, capital) available to producers. Nor, would they have any problem of choice in spending their income for goods and services.

Thus, individuals and a nation can modify their choices using less of a limited resource or product and more of the less scarce. By substituting one resource for another or one good or service for another, a nation can conserve those resources, goods and services that are in shortest supply.

To recap in abbreviated form, the instructional materials in this section have been developed to introduce and partially teach these understandings about the economy's productive resources.

1. Economic resources are limited relative to human wants.

2. Economic resources include a nation's natural resources, human resources, and capital equipment.

BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

3. Nations differ in the quantity and quality of their economic resources but no nation possesses unlimited resources.
4. Economic resources can be used in different ways to satisfy human wants.
5. Man is the catalyst or agent of change who determines how and to what extent limited economic resources shall be used, renewed, supplemented and/or substituted to produce economic goods and services.
6. Capital equipment, the product of human and natural resources, requires the sacrifice or postponment of consumption in the present to increase a nation's stock of capital equipment which in turn increases a nation's capability to produce more goods and services in the future unless, of course, there are large amounts of idle capital due to a depression or other unusual circumstances.
7. Economic resources do not combine themselves.
8. Resources are not perfect substitutes for one another.
9. By substituting one resource for another, a nation can conserve those resources that are in shortest supply.

CONCEPTS: Resources
Economic Resources
Economic Goods/Services

SKILLS: Selecting, organizing, categorizing data.

WHAT GOES INTO THE PRODUCTION OF GOODS AND SERVICES?

Several different procedures are suggested for developing this understanding.

Data gathered in preparing the individual family consumption expenditure categories can be used to select a specific economic good.

A specific economic good may be selected from the data that students gathered and categorized earlier. Or, an appropriate film that describes and provides information about the production of some economic good from anyone of the categories in the family consumption expenditure categories might be used.

BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

Our purpose is to use either of the suggested sources of data to identify the major categories of productive resources, namely, (1) natural resources, (2) human resources, (3) capital equipment. You might proceed as suggested below with appropriate modification to teach this basic understanding.

ALTERNATIVE PROCEDURE--1:

1. Have the class organize into small groups (not to exceed five students to a group) and have each group select a different category from the Class Profile of Family Expenditures, page 8a . Have each group select one economic good included in the category selected. For example: 8a

   Food; bread, milk, hamburger, frozen vegetable
   Clothing: shoes, coat, sweater, shirt, dress
   Transportation: bicycle, car
   Recreation: record, tennis racket, ping pong table
   Education: book, magazine

   Having made their selection of an economic good have each group work with this question: (You may wish to add economic services)

   WHAT DOES IT TAKE TO PRODUCE AND MAKE THIS ECONOMIC GOOD AVAILABLE FOR CONSUMPTION BY OUR OWN AND OTHER FAMILIES?

   Each member of the group should enter in his own notebook the entries compiled by his group.

   Depending on the economic good a group selects, these might be entries made on individual student preparation sheets:

   land
   wood-timber
   wool
   cotton
   iron, copper, chrome, aluminum
   land for factory, warehouse, office sites
   power to drive the machines to produce a good
   power to transport a good or service to our homes and communities
   persons who supplied the ideas--who envisioned the need for this particular good
   persons who designed the good
   persons who brought together the materials needed to produce the good; to sell and deliver the good to our families and community
   workers who operated the machines to produce the good
   persons who kept the records
   schools, colleges where people received training needed to produce the good
   others: (add)

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BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

HOW THEN SHOULD THESE ITEMS BE GROUPED? ARRANGED? Which items belong together? Why?

Note: Instead of conducting this in class discussion, we are attempting to work through the entire process of developing classifications within the working groups. Obviously, the teacher will need to be a resource person to each of the groups.

Try to have students complete the classification by the end of the period.

The preparation each group makes should be checked before the next class meeting.

In the next class period, have several of the groups present their categories explaining why they grouped the items they did. (This might be done in advance of class on a transparency or written on the chalkboard.

Again, be alert to student awareness of different bases for grouping items and that the label assigned is an arbitrary one. You are looking for groupings such as these:

Group I

land
timber
iron ore
copper
chrome
natural gas, petroleum
water power

Group II

farmers
machine operators
designers
manufacturers
salesmen
clerical workers
professional workers
policemen
firemen
teachers
barber

Group III

tools
machines
factory buildings
warehouses
retail stores
highways
school buildings

Have students suggest appropriate labels for each of the groups they develop and examine with the class reasons why some proposed labels are more appropriate than others. Labels are always arbitrarily assigned as a matter of convenience and although students may not suggest the specific labels we assign to the categories of resources, namely, (1) natural resources; (2) human resources; (3) capital equipment (man-made resources), these should be so indicated by the teacher since they are labels that are used in economics.

47 A summary is in order in which students should now be able to formulate a series of statements or write a statement (on page 47 in their manuals) not to exceed 100 words in which they indicate what is important or significant about what goes into the production of the

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BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

vast array of goods and services that we as members of families and citizens expect of the economy.

Note: Although student statements will not be in these words, statements taken from students papers are suggestive of what students bring to this preparation.

(1) Someone was dissatisfied and wanted a different and better kind of car. The same happens to all kinds of goods when people are dissatisfied with the things they have.

(2) Someone saw a need for these goods and services.

(3) People wanted these goods and services enough to spend money for them.

(4) Someone saw an opportunity to make some money by producing these goods or getting the training to provide a service wanted by other people.

(5) These goods and services had to be made out of raw materials. Someone had to bring the raw materials, workers, and tools together to make the goods. Henry Ford did this when he made cars.

(6) Goods have to be transported from the place where they are made to our community where we and other people can buy them.

(7) "In every good be it a loaf of bread, a car, or a book there is a "mix" of natural resources, human resources and machines (capital equipment)."

ALTERNATIVE PROCEDURE -2:

If a film is used, it is important to select one that presents information about each of the economic resources that is directly or indirectly used in the production of the particular economic good selected for the purpose of teaching the major understanding in this lesson.

For example, the film, DURUM: STANDARD OF QUALITY, 28 min. Color. Free return postage, North Dakota Wheat Commission, Box 956, Bismarck, North Dakota, or the Greater North Dakota Association, Box 1781, Fargo, North Dakota, explains the successive processes involved in producing the two billion pounds of macaroni that Americans currently consume. The film details the role of science in the development of durum wheat seed in the experimental laboratories and test fields of a

BASIC UNDERSTANDING: ALL PRODUCTION OF USEFUL GOODS AND SERVICES TO SATISFY HUMAN WANTS INVOLVES: (1) NATURAL RESOURCES; (2) HUMAN RESOURCES; AND (3) CAPITAL EQUIPMENT.

land grant agricultural college, the planting and successive stages of processing the wheat to make macaroni and bread flour. Repeated instances of natural and human resources and capital equipment and their interdependence are provided in this film that won first place in its category at the Brussels World Fair.

Another film that might be used is THE ROUGE, 30 min. Color. Ford Film Library. The American Road, Dearborn, Michigan 48121. Free-return postage. The film shows men and machines in the famous Rouge Plant, Dearborn, building cars. Here, also, the focus is on productive resources.

Preceding student viewing of the film have students either individually or in small groups work with the question: WHAT DOES IT TAKE TO PRODUCE AND MAKE THIS ECONOMIC GOOD, i.e., (MACARONI or AUTOMOBILE) AVAILABLE FOR CONSUMPTION BY OUR OWN AND OTHER FAMILIES?

This may be prepared as homework or during the first portion of the class period prior to viewing the film. Use the film as a source of additional information with students looking, listening and noting as many additions as possible to their first listing.

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

CONCEPTS: Natural Resources; Renewable Resources; Non-Renewable Resources; Scarcity; Limited Substitution.

SKILLS: Economic Analysis: Defining an economic problem, getting the facts, posing alternative solutions, weighing the consequences of each alternative in terms of the goals and values we are trying to achieve, deciding on a course of action.

ATTITUDES: Concern about being accurately informed about the state of the nation's natural resources.
Concern about wanting to act in accordance with one's convictions about natural resources and their proper use.

GENERALIZATION: Natural resources are limited relative to the demand made on them for: (1) working sp e; materials used in the production of goods and services; (3) energy derived from coal, petroleum, natural gas, water power, and uranium to supplement man's effort.

NATURAL RESOURCES: WHAT AND HOW MUCH DO WE CONSUME?

In the previous lesson, students identified natural resources as one of the major categories of resources in the production of a selected economic good and/or service. Here students arrive at an understanding of the characteristics of productive resources, namely, that they are not unlimited, that they differ in quantity and quality, and that they can be used differently, that is, iron ore can be used for pots and pans, automobiles, military hardware, pipe lines, buildings, bridges, and highways. But ever present are the constraints imposed by nature, the state of technical knowledge, and the productive capacity of a nation's people.

1. As an introduction to the magnitude of our present per capita consumption of natural resources in this country, we have provided on the student's assignment sheet an excerpt from the Report of the President's Materials Policy Commission in 1952, and the nation's consumption of natural resources in 1960 as reported by Hans H. Landsberg in Natural Resources for U. S. Growth based on the Resources for the Future study Resources in America's Future. 49

   This short reading can be used to stimulate discussion and thinking about possible reasons for our nation's present rate of consumption that is currently more than one-half of the world's raw materials.

   We suggest that you give students 10 minutes to read and think about this statement and prior to opening class discussion, ask students to write their reasons in the space provided on page 49. The discussion is to set the stage for posing the key questions that need to be 49 investigated and which, in turn, will provide a basis for understanding the characteristics, nature, and present status of our natural resources.

50 2. QUESTIONS: (1) WHERE DOES THE UNITED STATES STAND IN ITS SUPPLY OF EACH OF THE MAJOR RENEWABLE AND NON-RENEWABLE NATURAL RESOURCES? WHAT ARE THE FACTS?

(2) IN WHAT PARTS OF THE COUNTRY IS EACH OF THESE RENEWABLE AND NON-RENEWABLE RESOURCES CONCENTRATED?

(3) WHAT ARE THESE RENEWABLE AND NON-RENEWABLE NATURAL RESOURCES USED FOR? OR WHAT ECONOMIC GOODS AND SERVICES WOULD WE HAVE TO GO WITHOUT IF WE DID NOT HAVE THESE NATURAL RESOURCES?

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

PROCEDURE: Explain to the class that we'll organize Task Forces to investigate these questions.

Task Force--RENEWABLE NATURAL RESOURCES--U.S.A

51 Task Force--NON-RENEWABLE NATURAL RESOURCES--U.S.A.

Try to get balance in the membership of each of these task forces and also a different grouping than you have had in previous small group work. During the course of a semester it is important that students have opportunity to work with as many different members of the class as is possible. Numbering off by 4's starting at a different location in the room from where you've started numbering previously may give you needed diversity, or, in this case, you may wish to let students volunteer.

52 Important! Note to Teacher

Preliminary to any meeting of the Task Force personnel as a group, have each member of a task force follow this sequence:

Individual Student Preparation

51-52 52-54 Each student member of a Task Force should read and inform himself on all of the readings listed for his task force's reading assignment. These are listed in the Student Manual on pages 51-52 to facilitate student preparatio As a study aid, we are providing space in the Student Manual for each student to enter well organized notes on the three basic questions prior to planning with the other members of his Task Force for the report they will make to the class. Or, you may have the students set up a Retrieval Chart on which they enter selected data about a given resource. This is viewed as "insurance" against sketchy, careless reading and an attitude of "let George do it"--problems much too common in group work that contribute to vague, inaccurate, and poorly organized group reports. Additional sheets can be inserted.

Try to plan this individual student preparation so it is completed in not more than two days using class time for supervised work and the remainder to be done as homework.

A word of caution is in order. Avoid making these sessions a series of lessons on conservation. Students will, most likely, want you to go in this direction. This is not to say that conservation is to be ignored. Rather, it will be considered as one aspect of the question of what has been done and what needs to be done in extending and renewing those natural resources that are in declining supply. That is a subsequent question.

Task Forces Meet to Plan and Prepare Their Presentations. 52

You may wish to assign the chairmanship and meet with the chairmen in advance of the meeting of the three groups. If the groups select the chairmen a meeting is still in order so each of the chairmen is prepared to assist his group. Give attention to the role of the chairman in facilitating group work:

Help each Task Force to select and organize those materials that will contribute to an accurate and interesting report. Keep focus on three basic questions:

Be accurate in reporting and interpreting information. The importance of selection and accuracy cannot be overemphasized and each Task Force needs to be mindful 52 that the rest of the class relies on it for information. This is a common weakness in group reports and one that this procedure should help students resolve.

Suggest students develop graphic aids--a retrieval chart, data sheets, a ditto graph prepared in advance and made available to all of the students; a well organized outline specifying the main parts of the report with sub-points and pertinent data as appropriate can be worth a thousand words. A Task Force may plan an entire bulletin board layout explaining the data in its oral presentation. Help

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

Note: students to become more efficient and accurate in presenting findings to a group. These are basic skills that need to be taught and developed with repeated experiences in the Foundation Course. Try to avoid strictly expository presentations.

Each Task Force Reports and Answers Questions.

A maximum of 20 minutes for reporting and 10 minutes for answering questions should be an appropriate time for each group's report.

-54 Class Prepares Summary Statement on the state of the nation's natural resources as a final summary on completion of the reports.

Note: The reading, Natural Resources in the Economy, is provided here for your information.

53 Selected films and filmstrips might be used here to supplement the Task Force Reports. When possible coordinate the viewing with the Task Force Reports to provide additional data for students to check conclusions based on the data provided in their manuals, pages 66-100. Additions and revisions should be entered in their manuals on page 53.

The films and filmstrips listed here have been previewed and those marked with an asterisk have been used and recommended by teachers in cooperating public schools.

Films

*Yours Is the Land. 20 min. sd. color. $7.45. Audio Visual Service, University of Illinois, Champaign: University of Indiana, Bloomington.

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

Emphasizes the interdependence of the four great renewable natural resources: soil, water, forests and grasslands, and animal life. Examines the results of man's practice of taking too much from the earth in too short a time and emphasizes the need for a system of orderly management of our natural resources.

Look to the Land. 20 min. Color. $7.45. B&W. $4.55. Audio Visual Service, University of Illinois, Champaign, Illinois, and University of Indiana, Bloomington.

All people are dependent on the land hence they must be concerned with its use. Film documents the misuse of our land with the resulting problems as the narrator visits a New England farm auction, the Connecticut Valley, an Alabama cotton farmer who has sold his land when a dam is constructed, a Dakota farmer, a Wyoming cattleman, and a timberland region. Illustrates the interdependence of all the people in a river basin.

Everyman's Empire. 20 min. Color. $4.55. Audio Visual Services, University of Illinois, Champaign.

Today 152 national forests are owned by the people of the United States. The film points out that these forests contain almost one-third the nation's timber. Here, also, are vast storehouses of water which supply water to many of our towns and cities; grasslands provide range for the ranchers. Here are food and cover for wildlife, streams for fish, and recreation areas for millions of Americans generations to come.

*Living Water, Part 2 Man's Problem. 19 min. Color $6.85. Audio Visual Service, University of Illinois, Champaign.

Shows how man has short-sightedly interfered with nature's water cycle. Shows the results of improper usage of Los Angeles and the incredible use man makes of water. Shows how sewage and manufacturing plants pollute water, and describes methods of purification.

*Twentieth Century River---? 29 min. Color $7.90. Audio Visual Service, University of Illinois, Champaign.

Documents the drafting of a river basin plan for the Potomac River over a six year period. Shows the work of the engineers, scientists, conservationists, and other specialists whose varied efforts are combined in a single plan. Examines such problems as flood, drought, pollution, and sedimentation and the major concepts involved in recreation planning and parkland acquisition.

*It's Your Decision--Clean Water. 14 min. Color. Free. Association Films, 561 Hillgrove Avenue, LaGrange, Illinois.

A report on the nation's water crisis pointing out three causes of the current lack of usable water: people, prosperity and products. Using animation, the film points out that increased utilization of renovated water could provide an additional source of supply. Illustrating and evaluating different kinds of waste treatment in use today, the film emphasizes that the decision to have good sewerage treatment depends on the will of the community and the determination of the citizens to control pollution.

*The Colorado River. (Coronet). 11 min. Color. $3.80. Audio Visual Service, University of Illinois, Champaign, Illinois.

The film shows how the Hoover, Parker and Imperial Dams have turned the Colorado into one of the world's greatest sources of electrical power, make it the site of recreational areas and reclaimed the Imperial Valley from a barren desert.

Filmstrips

*What's Happening to Our Natural Resources. May 1963. The New York Times. $6.00 with script. 229 West 43 Street, New York, N.Y. 10036.

*Air and Water. February 1967. A sound filmstrip with manual. The New York Times.

Water Conservation Today
Land Conservation Today
Mineral Conservation Today
Urban Conservation Today

Society for Visual Education, Inc.
1345 Diversey Parkway
Chicago, Illinois 60614
$6 each with script - Records $3

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57-58 6-7. These minerals might be ranked in order of percentage increase.

Students can consult the encyclopedia for information about their location in the United States and other countries. Also see Table 1.5 in Student Manual. What products are made from these minerals?

Notes on a few of the critical minerals are provided for your information.

Magnesium: Necessary in the making of steel to improve its strength and workability. The United States has no high grade deposits. The only present commercial reserves are in Montana. Potential ore of lower grade is scattered with ore bodies in Minnesota, Maine, Arisona, South Dakota. Unless a way is found to utilize this potential ore without a sharp increase in price, the United States must continue to rely on imports. Manganese bearing nodules are on the ocean floor at depths from 500 to 3000 feet off the southeastern coast and between 5,000 and 14,000 feet in the eastern half of the Pacific.

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

Cobalt: Used in the making of magnets, missiles, jet engines, gas turbines, motors, generators, and for cancer treatment. The United States has small reserves. Foreign reserves are large with the Congo a major source and also the Philippines, New Caledonia, Northern Rhodesia, and Canada. A potential source is in ocean bottom nodules.

Nickel: The United States is almost completely dependent on foreign supplies for nickel. Major deposits are in Canada, New Caledonia, Cuba, the Philippines and Indonesia.

Molybdenum: The United States has been and will most likely continue to be a net exporter. The world total is estimated to be 6 billion pounds. The U. S. deposits are estimated to be at least 3 billion pounds with new deposits discovered in New Mexico as recently as 1960.

Copper: The history of copper ore deposits in the United States and abroad, according to Resources for the Future, is one of steadily increasing reserves. The grade of copper ore mined has declined steadily but the price has remained stable. For example, in 1880, the copper ore mined contained 3% copper; in 1914 it had declined to 2%; in the early 1950's it had dropped to 0. 8%. Or, to state it differently, by 1945, 4 tons of copper bearing ore had to be moved for every ton seventy years earlier. Additional costs were offset by improved technology on processing the ore. Projected U. S. consumption of copper in the next 40 years is estimated by Resources for the Future to be 112 million tons. This cannot be met from our domestic reserves estimated to be 32. 5 million tons. The U. S. must depend on outside sources for copper ore which currently supply 30% of copper ore refined in the United States. Demand for copper outside the U. S. is expected to grow making necessary the working of low grade deposits.

Figure 1. 1 indicates an impressive future demand for minerals. Having examined the data on the nations capability to provide these minerals in the quantity needed, we raise the question of price. 57

8. With certain of these minerals in short supply and potential demand expected to increase sharply, students will probably conclude that the price of these minerals will rise. But, need this happen? Indeed, has it in the past? Actually, for most minerals the long-run price trend has been stable despite increasing demand. How can this be? 58

9. Do students see the impact of technology and new techniques for creating new reserves by reducing the cost of developing less attractive deposits? For example, the Atomic Energy Commission has been investigating the use of nuclear explosives to blast out harbors and canals, to create underground storage cavities, and to release natural gas and oil locked beneath the earth's surface. A team of scientists has worked out a nuclear plan to mine billions of tons of copper-bearing ore too poor to be mined by traditional mining methods. If Project Sloop works, technicians using nuclear techniques may be able some day to process tens of millions of tons of ore containing copper that is now beyond man's grasp. [Reported in Time, November 3, 1967] 58

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

Other possible solutions are: (1) SUBSTITUTE MATERIALS, i.e., plastics and aluminum for iron and steel; or brick, concrete, aluminum, steel and non-wood vegetable fiber as substitutes for forest products; (2) DISCOVERY AND DEVELOPMENT OF ADDITIONAL NEW RESERVES; (3) IMPORTS from sources outside the United States; (4) USE OF TECHNOLOGY AND EDUCATION to conserve (stretch) scarce resources, i.e., fertilizers, tractors.

However, if costs should rise significantly in relation to other costs to obtain minerals in present short supply as well as other natural resource products, or if the costs of developing substitutes for them should rise sharply in the decades ahead, our nation would have to devote larger shares of manpower and capital to the production of these scarce minerals. Should this happen, fewer resources in manpower and capital would be available for productive effort to achieve other economic goals.

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BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED

59 Here we consider an important characteristic of resources. Natural renewable and non-renewable resources should not be viewed as existing in fixed quantities. Throughout the readings and questions in this section on natural resources the degree of economic scarcity as it concerns our nation's or any nation's natural resources varies in terms of the demand for resource products and in terms of the level of technology to develop substitute resources. In an important sense, then, economic constraint is not something that is fixed or that should be treated as a given but rather economic constraint should be viewed as something that can be itself influenced or regulated by human resources. For example, in the early 1900's the cultivable land area of the United States was fixed. Yet by substituting the tractor for horses or machine power for animal power the United States increased its land available for the production of food by nearly one-third.

103-115 10. To further develop this understanding three extended statements by specialists are provided for student reading and critical discussion. Each reading presents a position on the question, What Is the Outlook for Our Nation's Renewable and Exhaustible Resources to Provide Quality of American Life in the 21st Century?

59-62 Have students read these position statements by Joseph L. Fisher, Eugene Holman, and Orville Freeman and prepare the questions provided in their manuals for each of the position statements. This preparation should be thoughtfully and accurately made. In the class discussion that follows, make sure that students are making accurate interpretations of the position and reasons each specialist takes on our natural resources for a quality life in America in the 21st century. There is ample material here for provocative class discussions which may require two class periods.

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

Having critically examined and discussed these three readings, have the students write an essay, 200 words--more or less, in which they develop their own position statements on the question, Do We Have Enough Natural Resources to Assure Quality of American Life in the Year 2000? 63-64

BASIC UNDERSTANDING: NATURAL RESOURCES CAN BE USED IN DIFFERENT WAYS

11. Here we consider a second important characteristic of resources, namely, natural resources can be used in different ways. 65

For example, land can be used to grow wheat, for a factory site, a public school, state university, playground, to build a housing development or a super-market, etc. Timber can be used for construction, recreation, pulpwood, fuel, or tree farming, etc.

What particular use the resource will serve is again a function of the demand for the resource products and the state of existing technology that makes it possible to use the resource in different ways. That is, the ways in which a resource is used is determined by the final goods people want. If people want furniture, the demand will be on forests. If people want lawnmowers, automobiles, and refrigerators, the demand will be on mines.

12. Up to a point resources can be used for each other. If a country is short on labor and has abundant land as we have had throughout most of our history, land will be used freely, indeed wastefully and labor will be rationed. The alternate use of these resources is, however, limited by the fact that they are not perfect substitutes. 65

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15. As a summary on the economy's natural resources, we have students consider a fifth important question, namely, HOW DO OUR NATURAL RESOURCES NEED TO BE CONTROLLED TO ASSURE AN ADEQUATE SUPPLY AND A QUALITY ENVIRONMENT IN THE 21st CENTURY? 66

Students should consider this question in terms of:

1. What can they do? What is the responsibility of the individual citizen? 66
2. What can business firms do? What is the responsibility of the private sector of the nation's economy? 67
3. What can local, state, and national governments do? What can be done by the public sector of the nation's economy that cannot be done by the private sector to assure an adequate supply of natural resources for the future and a quality environment in the 21st Century? 67

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

There is also an international dimension of this question which you may or may not want to consider at this time.

The readings listed in the Task Force bibliography, pp. 51-52 , provide some information on proposals for renewing and extending our supply of natural resources. These readings should be rechecked for information prior to formulating recommendations for a program of action. Also, have students consult The Readers Guide to Current Periodical Literature for articles in current periodicals. A few of the many excellent articles teachers recommend are:

"A Call for Resources Statesmanship." American Forests, August 1967.

"Wake Up Foresters--You're Needed." American Forests, May 1967.

"Pollution in the East: Once Upon a River." American Forests, July 1967.

"Pollution in the West: Industry Struggles With Pollution Problems." American Forests, July 1967.

"Water: Worldwide Use and Misuse" with pictures. Time, October 1, 1965.

"The Crisis in Water: Its Sources, Pollution and Depletion"--special issue with regional reports from Chicago, St. Louis, New York, Cleveland, Seattle, Los Angeles, Phoenix, Miami, in Saturday Review, October 23, 1965.

"350,000 Tons of Smog a Day and the Fight Against It." U. S. News, March 1, 1965.

Life Nature Library. The Forest; Ecology published by Time-Life. Distributed by Silver Burdett Company, Department T-L, Morristown, New Jersey.

Life Science Library. Water published by Time-Life. Distributed by Silver Burdett Company.

T-15 **Films** Living Water
Twentieth Century River

You might arrange for resource persons in the community to discuss with the class industry's role, and/or the role of governments.

Having gathered information from the several different sources suggested, each Task Force should be prepared to:

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

Weighing Alternatives

1. propose and examine alternative courses of action 66

Making Recommendations

2. prepare a set of recommendations on questions 15.1, 15.2, 15.3 (S.M. p. 66) 66-67

Taking Action

3. and present to the class. These might be recorded for playback to the class and shared later with other groups. Articles in the school and community paper, letters to the editor, bulletin board layouts, sharing recommendations and enlisting cooperation of the school's and local community's civic organizations, i.e., Rotary, Women's Clubs, Farm Bureau, Farm Adviser, Boy Scouts, Parent-Teacher Association. 67

16. SUMMARY: Natural Resources and the Economy in the Year 2000 117

Here we use for an interim summary on natural resources Figure 1.16 Increased Population: New and Bigger Demands on the Nation's Resources, which graphically relates the natural resources we have been discussing to some of the final products and total national output or Gross National Output. At the base of this chart are several of the major natural resources which go into making final products. In between are the human resources classified as population, labor force, and households that combine these resources to produce the nation's final products. 116

16.1 Here we are concerned with the impact of a greatly enlarged population, estimated to be 300,000,000, on the American economy. This involves both quantity and quality changes in American life. A population of 300 million even without any change in consumer or producer preferences will require enormous increases in the natural resources used to produce its final goods and services, i.e., water, iron, timber, fuel energy. Of even greater significance is that the enlarged population will want entirely new or improved goods and services reflecting the fact that income will also have increased along with the population. Enlarged income will permit not only more but different economic choices. Peoples' choices as to final products determine the resources to be used. Health, education, and welfare demand different resources than automobiles, television sets, and super sonic jets. Hence, the importance of different economic choices in their impact on the nation's natural resources.

16.2 Throughout American history income has increased at a faster rate than population. This has permitted a continuous 117

BASIC UNDERSTANDING: NATURAL RESOURCES ARE LIMITED AND CAN BE USED IN DIFFERENT WAYS.

enlargement of economic choices. What are these choices likely to be in the year 2000 when the United States will have a population of 300 million people? Will Americans spend their income in the same manner for the same goods and services as they do today? If history is a guide, probably not. For example, throughout those parts of the world that have enjoyed increased income, i.e., economic choice, the demand for education tends to increase faster than income. Since education is usually a social good that is provided by the community, increased income is accompanied by a relatively greater demand for social goods. There is some evidence that the same may be true of parks, public transportation, health including pollution control.

16.3 and 16.4 The particular resources used by an economy are in large measure determined by the final goods and services that people demand. If increased income brings about a relatively greater demand for education, recreation, and other social goods this will be reflected in the demand for other resources than those which are used to produce food, clothing, and shelter.

NATURAL RESOURCES: WHAT AND HOW MUCH DO WE CONSUME?

In 1950, we estimated that over 2 1/2 billion tons of materials were being used up each year to keep this country going and to support its high standard of living. Each person in the country uses up, on an average, some 36,000 pounds a year. He used about 14,000 pounds of fuel for heat and energy--warming houses and offices, running automobiles and diesel trains, firing factory boilers, and performing hundreds of other tasks. He uses 10,000 pounds of building materials--lumber, stone, sand, and gravel, plus 800 pounds of metals from 5,000 pounds of ores. He eats nearly 1,600 pounds of food; this together with cotton and other fibers for clothing, pulpwood for paper and other miscellaneous products mounts up to 5,700 pounds of agricultural materials. In addition he uses 800 pounds of metallics, such as lime, fertilizer and chemical raw materials. Each of us for drinking, washing, industrial and agricultural purposes consumes 365,000 gallons of water each year. With 6 per cent of the world's population, the United States consumes over half of its raw materials. (William A. Stead, Natural Resources for a Growing Economy)

In 1960 the United States used 80 million tons of metals (measured in their steel equivalent), 45 quadrillion Btu of energy (the equivalent of 1 3/4 billion tons of coal or of around 8 billion barrels of oil), 11.5 billion cubic feet of timber, and nearly $21 billion worth of farm products; and 85 billion gallons per day of the fresh water withdrawn from the lakes and streams. These were the resource requirements of a nation of 180 million. (Hans H. Landsberg, Natural Resources for U. S. Growth)

1. Having read these statements on our per capita consumption of natural resources for 1950, and the statement of our nation's consumption of natural resources for 1960, why, with 6% of the world's population, does our country consume over half the world's raw materials? Write your reasons here and be prepared to discuss them in class.

NATURAL RESOURCES: WHAT AND HOW MUCH DO WE CONSUME?

2. Perhaps you are beginning to wonder whether or not we have enough land, timber, iron ore, petroleum, coal, water and natural gas.

    (1) Where does the United States stand in its supply of each of the major Renewable and Non-Renewable Natural Resources? What are the facts?

    (2) In what parts of the U.S.A. is each of the major Renewable and Non-Renewable Resources concentrated? What are the facts?

    (3) What are these natural resources used for--what economic goods and services would we have to go without if we did not have these natural resources?

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

Your teacher will help your class organize Task Forces to determine where we, a nation, stand as concerns our renewable and exhaustible resources. Each Task Force will be the "experts" on the specific resource(s) it investigates searching out recent accurate information on the questions, page 50.

1. To help you in your investigation, selected findings by scholars and specialists provided in this manual starting on page 70 are listed below. Use these materials first. Then you may wish to search out additional recent sources of information using the Reader's Guide to Current Periodical Literature.

TASK FORCES ON THE NATION'S RENEWABLE NATURAL RESOURCES

LAND pp. 70-72

Table 1.1	Total Land and Land Owned by the Federal Government, By States 1964.
Table 1.2	Utilization of Farm and Non-Farm Land, 1880, 1950, and 1959.
Figure 1.2	The Nation's Land Capability
Figure 1.3	Land Capability by Regions

TIMBER pp. 73-77

Figure 1.4	Forest Regions of the United States
Table 1.3	Commercial Forest Land

WATER pp. 77-83

Table 1.4	Supply and Use of Water in the United States, 1900-1960
Figure 1.5	Major Water Problems in the United States
Figure 1.6	Use, Demand, and Supply of Water in the United States

AIR pp. 83-86

Figure 1.7	Areas with Air Pollution Problems in the United States
Figure 1.8	Total Refuse Production in the United States

NOISE LEVELS pp 87-90

NATURAL RESOURCES: Balancing Quantity and Quality, pp. 89-92

Filmstrip: Water and Air

TASK FORCES ON THE NATION'S NON-RENEWABLE RESOURCES

IRON, FERROALLOYS, METALS pp. 91-96

Figure 1.9	Value of Mineral Production in the United States, 1925-64
Figure 1.10	Value of Mineral Production in the United States, By State, 1963
Table 1.5	Mineral Production and Principal Producing States, 1964

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

COAL pp. 96-99

Figure 1.11	Percent of Coal Reserves of the World
Figure 1.12	Coal Areas in the United States

PETROLEUM AND NATURAL GAS pp. 100-102

Figure 1.13	Fields of Oil in the United States
Figure 1.14	Fields of Natural Gas in the United States
Figure 1.15	Natural Gas Pipelines, June 1965
Table 1.6	Oil Wells: Output Per Well Per Day, 1964
Table 1.7	Average Annual Output of Crude Petroleum, 1861-1964

NATURAL RESOURCES: Balancing Quantity and Quality, pp. 103-105

Filmstrip: What's Happening to Our Natural Resources

2. Using the readings and statistical data provided on the Tables and Figures, prepare your answers to each of the three questions (pages 50) before you meet with the other members of your Task Force to plan the group's presentation to the class. Having made this preparation first, you will be much better informed and able to use this information in planning the Task Force report.

   Your teacher will discuss with you how you might organize your information so you deal with the questions. This preparation should be done on your own paper and then inserted here in your manual.

   As you organize your findings, try to think of ways in which this information can be used by your Task Force so the rest of the class has the benefit of your "research." This requires ACCURACY in SELECTION AND EXPLANATION.

3. TASK FORCE REPORTS: What important information did each Task Force present in this report to the class? Remember, here you are concerned with factual information about particular resources. Try to identify the important points of information. If the Task Force report is well organized and the information has been accurately and clearly selected and explained, these should not be difficult to identify. What conclusions does the Task Force make about the resource? Do they support their conclusions with sufficient evidence?

   In the space provided below, prepare for each Task Force your "checked out" conclusions that can be made about the state of the nation's renewable and non-renewable resources. These should be revised, final entries.

TASK FORCES ON RENEWABLE NATURAL RESOURCES

Land:

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

Timber:

Air:

Water:

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

TASK FORCES ON NON-RENEWABLE RESOURCES

Iron, Ferroalloys, Metals:

Coal:

Petroleum and Natural Gas:

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

4. Here your teacher will arrange for class viewing of a film and or filmstrip that has not been used as a source of information by anyone of the Task Forces. What additional information is provided? Does it confirm or deny information presented by the reporting Task Force? What revisions need to be made in your entries to make more accurate and complete your entries on the resources (pages 53-54). Enter additions and revisions below.

Resource:

Revisions:

Resource:

Revisions:

Resource:

Revisions:

Resource:

Revisions:

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

5. It is estimated that in 1980, the United States will have a population of 245 million, a labor force of 102 million, and that the nation's economy will produce $1060 billion in goods and services.

Assume that our nation reaches these projected estimates for its population, labor force, and total output of goods and services in 1980.

5.1 What demand will 1980 make on our Renewable Resources? What reasoned predictions can you make? Enter your predictions below with reasons.

5.2 What demand will 1980 make on our Non-Renewable Resources? Enter your predictions below with reasons.

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

6. Using the data given in Figure 1.1--Increase of Raw Materials Needed in the U. S. by 1975, what minerals will be in greatest demand in 1975? What explanation can you give?

FIGURE 1.1

INCREASE OF RAW MATERIALS NEEDED IN THE U.S. BY 1975

Raw Material	PER CENT INCREASE NEEDED OVER 1950
Fishery and Wildlife Products	40%
Forest Products	17
Iron	54
Chromium	75
Cobalt	344
Manganese	50
Molybdenum	170
Nickel	100
Tungsten	150
Copper	43
Lead	53
Zinc	39
Bauxite	291
Magnesium	1,845
Tin	18
Titanium and Cadmium	324
Coal	54
Petroleum and Natural Gasoline	109
Natural Gas	142

Source: Report of the President's Policy Commission, 1952

7. What is made from these minerals that will be in high demand in 1975? Where are these minerals located?

Minerals in high demand in 1975	Goods/Products made from these minerals	Where these minerals are to be found in large supply
1.		
2.		
3.		
4.		

8. What will probably happen to the price of these minerals as we approach 1975?

9. What are possible solutions to this kind of situation?

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

10. The important questions we need to think about now and prepare to discuss are: WHAT IS THE OUTLOOK FOR OUR NATION'S RENEWABLE AND EXHAUSTIBLE RESOURCES TO PROVIDE QUALITY OF AMERICAN LIFE IN THE 21st CENTURY?

The three readings by Joseph L. Fisher, Orville Freeman, and Eugene Holman will acquaint you with what the experts think. Read these articles thoughtfully and answer the questions which will provide a basis for your class discussion.

10.1 Fisher, Joseph L. "Natural Resources: Balancing Quantity and Quality," pp. 103-115.

- Will there be enough major natural resources in 2000?

- What reasons does Mr. Fisher give in support of his position?

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

- What problems does he anticipate?

- How does Mr. Fisher think these problems can be solved?

10.2 Freeman, Orville. "Looking Ahead to the Year 2000," pp. 112-115.

- Two pictures of USA in the year 2000 are presented in this reading. One might be called a Quantity Picture, the other a Quality Picture. List or write a series of statements that describe each picture of our nation in 2000?

USA: A QUANTITY PICTURE	USA: A QUALITY PICTURE

Mr. Freeman takes the position that quantity alone is not enough. How does he believe we can achieve the QUALITY picture--QUALITY OF AMERICAN LIFE IN 2000?

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

10.3 Holman, Eugene. "Our Inexhaustible Resources," pp.

- What does Mr. Holman think? Will we have enough natural resources?

- What reasons does Mr. Holman give in support of his position?

10.4 What is YOUR position on this question? Do We Have Enough Natural Resources to Assure Quality of American Life in the Year 2000? Develop with supporting evidence in a well written essay (try not to exceed 200 words). Or, you might prefer to prepare a tape-recorded essay which will be played back and responded to by the class.

(Continue on other side of page)

WHAT IS THE STATE OF OUR NATURAL RESOURCES?

10.4 (continued)

WHAT ARE THE CHARACTERISTICS OF NATURAL RESOURCES?

11. How many different possible uses can you give for each of the natural resources given below? Under each resource, write the different uses it might fulfill.

LAND can be used for:

____

____

____

____

____

IRON ORE can be used for:

____

____

____

____

____

WATER can be used for:

____

____

____

____

____

TIMBER can be used for:

____

____

____

____

____

COAL can be used for:

____

____

____

____

____

PETROLEUM can be used for:

____

____

____

____

____

12. What determines what particular use is made of a given natural resource? Illustrate by using examples from your entries to question 11 for at least 3 different resources.

WHAT ARE THE CHARACTERISTICS OF NATURAL RESOURCES?

13. What do all natural resources appear to have in common?

14. Of what importance is this to our country? Indeed, to any nation?

15. In summarizing our study of natural resources and the nation's economy we need to consider another very important question: HOW DO OUR NATURAL RESOURCES NEED TO BE CONTROLLED TO ASSURE AN ADEQUATE SUPPLY AND A QUALITY ENVIRONMENT IN THE 21st CENTURY?

    15.1 What can you do? What is the responsibility of the individual citizen?

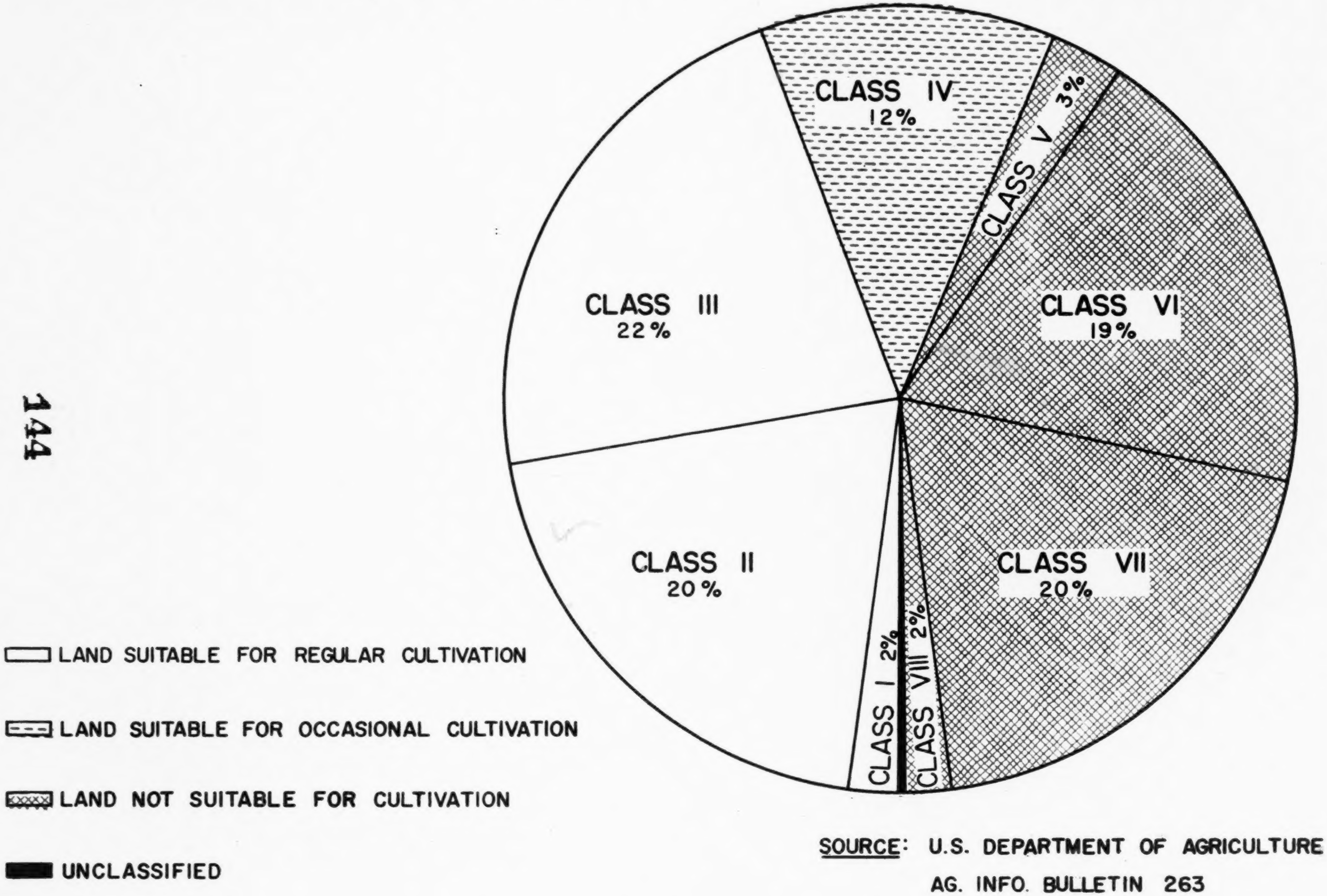
15.2 What can business firms do? What is the responsibility of the private sector of the nation's economy?

15.3 What can local, state, and national governments do? What can be done through the public sector of the nation's economy that the private sector cannot do to assure an adequate supply of natural resources and a quality environment in the 21st century?

Since recommendations are in order, your teacher will have you return to your Task Force to prepare a set of recommendations on each of the three questions, 15.1, 15.2, 15.3. Your Task Force might tape record its recommendations and present its report to the class via play back. How might you act on your recommendations?

THE NATION'S LAND CAPABILITY

FIGURE 1.2

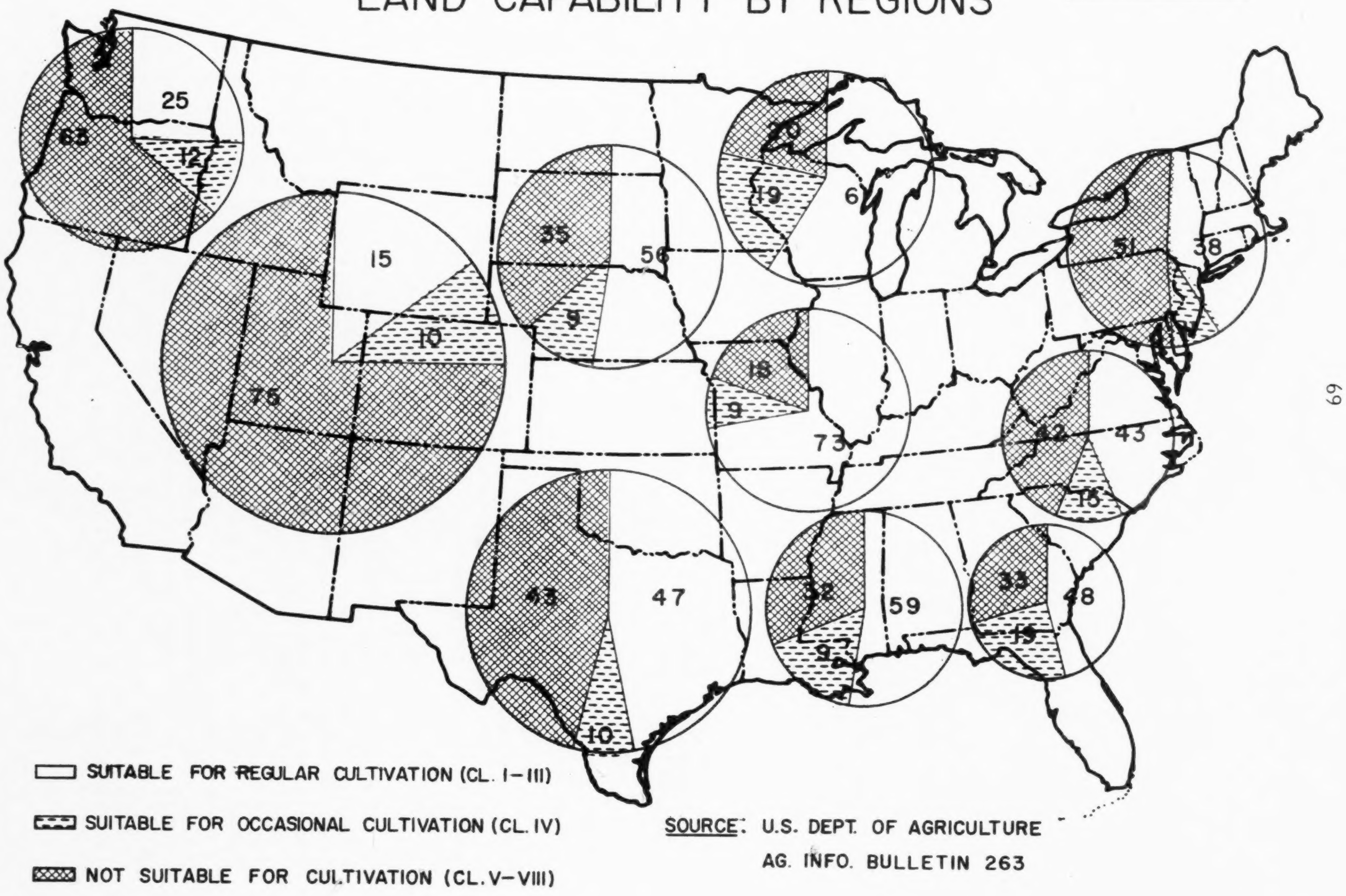


SOURCE: U.S. DEPARTMENT OF AGRICULTURE
AG. INFO. BULLETIN 263

SSCSC — '65

FIGURE 1.3

LAND CAPABILITY BY REGIONS

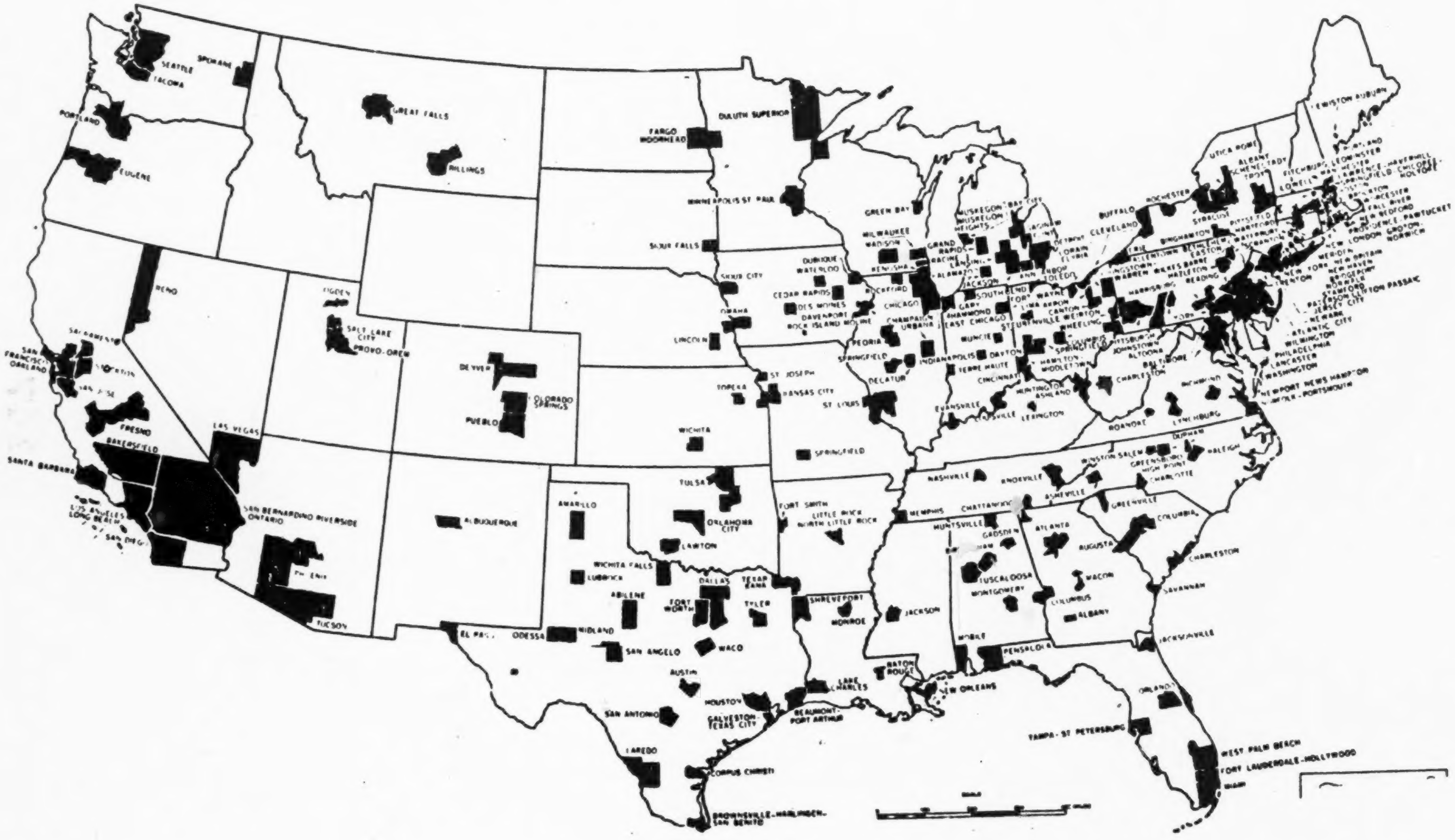

25
63
12
15
10
75
35
56
9
20
19
6
18
9
73
51
38
42
43
16
43
47
10
32
59
9
33
48
19
☐ SUITABLE FOR REGULAR CULTIVATION (CL. I–III)
▤ SUITABLE FOR OCCASIONAL CULTIVATION (CL. IV)
▩ NOT SUITABLE FOR CULTIVATION (CL. V–VIII)

SOURCE: U.S. DEPT. OF AGRICULTURE
AG. INFO. BULLETIN 263

SSCSC – '65
C – 3 – 4

FIGURE 1.7

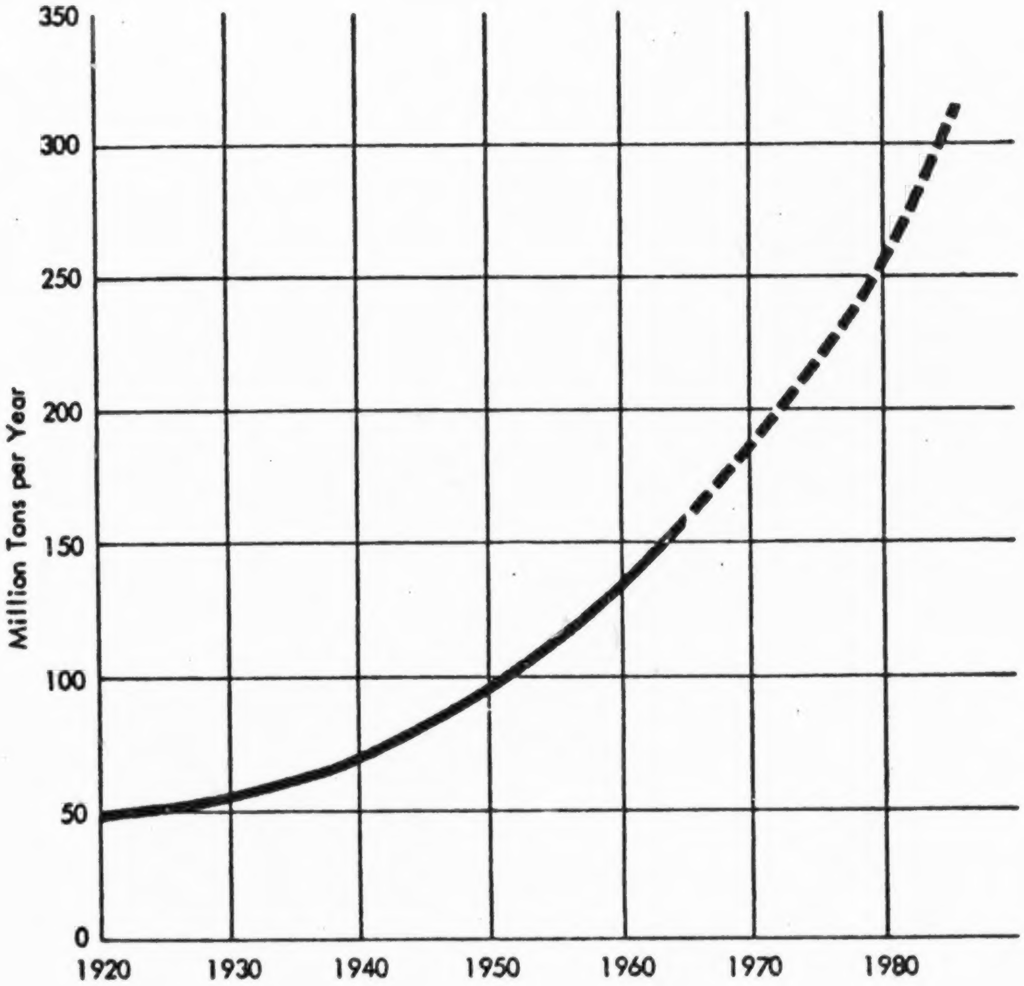
AREAS WITH AIR POLLUTION PROBLEMS IN THE UNITED STATES


SEATTLE
TACOMA
SPOKANE
PORTLAND
EUGENE
GREAT FALLS
BILLINGS
RENO
OGDEN
SALT LAKE CITY
PROVO-OREM
SACRAMENTO
SAN FRANCISCO OAKLAND
STOCKTON
SAN JOSE
FRESNO
BAKERSFIELD
SANTA BARBARA
LOS ANGELES LONG BEACH
SAN DIEGO
LAS VEGAS
SAN BERNARDINO RIVERSIDE ONTARIO
PHOENIX
TUCSON
DENVER
COLORADO SPRINGS
PUEBLO
ALBUQUERQUE
EL PASO
ODESSA
MIDLAND
AMARILLO
LUBBOCK
WICHITA FALLS
ABILENE
SAN ANGELO
AUSTIN
SAN ANTONIO
LAREDO
CORPUS CHRISTI
BROWNSVILLE-HARLINGEN-SAN BENITO
DALLAS
FORT WORTH
WACO
TYLER
TEXARKANA
HOUSTON
GALVESTON-TEXAS CITY
BEAUMONT-PORT ARTHUR
FARGO MOORHEAD
DULUTH SUPERIOR
MINNEAPOLIS ST PAUL
SIOUX FALLS
SIOUX CITY
OMAHA
LINCOLN
TOPEKA
WICHITA
TULSA
OKLAHOMA CITY
LAWTON
ST JOSEPH
KANSAS CITY
ST LOUIS
SPRINGFIELD
FORT SMITH
LITTLE ROCK NORTH LITTLE ROCK
SHREVEPORT
MONROE
LAKE CHARLES
BATON ROUGE
NEW ORLEANS
JACKSON
MEMPHIS
DUBUQUE
WATERLOO
CEDAR RAPIDS
DES MOINES
DAVENPORT ROCK ISLAND MOLINE
GREEN BAY
MILWAUKEE
MADISON
KENOSHA
RACINE
ROCKFORD
CHICAGO
PEORIA
SPRINGFIELD
DECATUR
CHAMPAIGN URBANA
GARY
HAMMOND
EAST CHICAGO
MUSKEGON
MUSKEGON HEIGHTS
BAY CITY
SAGINAW
FLINT
GRAND RAPIDS
LANSING
KALAMAZOO
JACKSON
DETROIT
ANN ARBOR
TOLEDO
SOUTH BEND
FORT WAYNE
LIMA
AKRON
CANTON
STEUBENVILLE WEIRTON
WHEELING
MUNCIE
INDIANAPOLIS
DAYTON
TERRE HAUTE
SPRINGFIELD
COLUMBUS
HAMILTON-MIDDLETOWN
CINCINNATI
HUNTINGTON ASHLAND
EVANSVILLE
LOUISVILLE
LEXINGTON
CHARLESTON
PITTSBURGH
JOHNSTOWN
ALTOONA
BUFFALO
CLEVELAND
LORAIN ELYRIA
ERIE
YOUNGSTOWN-WARREN
ROCHESTER
SYRACUSE
UTICA ROME
ALBANY SCHENECTADY TROY
BINGHAMTON
ALLENTOWN BETHLEHEM EASTON
WILKES BARRE HAZLETON
SCRANTON
READING
HARRISBURG
YORK
LANCASTER
PHILADELPHIA
WILMINGTON
ATLANTIC CITY
TRENTON
NEWARK
JERSEY CITY
PATERSON CLIFTON PASSAIC
NEW YORK
STAMFORD
NORWALK
BRIDGEPORT
NEW HAVEN
NEW BRITAIN
MERIDEN
NEW LONDON GROTON NORWICH
WATERBURY
HARTFORD
PITTSFIELD
PROVIDENCE-PAWTUCKET
FALL RIVER
NEW BEDFORD
WORCESTER
BROCKTON
BOSTON
SPRINGFIELD-CHICOPEE-HOLYOKE
LAWRENCE-HAVERHILL
LOWELL
MANCHESTER
FITCHBURG LEOMINSTER
PORTLAND
LEWISTON AUBURN
BALTIMORE
WASHINGTON
RICHMOND
ROANOKE
LYNCHBURG
NEWPORT NEWS HAMPTON
NORFOLK-PORTSMOUTH
DURHAM
RALEIGH
WINSTON SALEM
GREENSBORO HIGH POINT
CHARLOTTE
NASHVILLE
KNOXVILLE
ASHEVILLE
CHATTANOOGA
HUNTSVILLE
GADSDEN
BIRMINGHAM
TUSCALOOSA
MONTGOMERY
MOBILE
PENSACOLA
ATLANTA
AUGUSTA
MACON
COLUMBUS
ALBANY
GREENVILLE
COLUMBIA
CHARLESTON
SAVANNAH
JACKSONVILLE
ORLANDO
TAMPA-ST PETERSBURG
WEST PALM BEACH
FORT LAUDERDALE-HOLLYWOOD
MIAMI

U. S. Department of Commerce, Bureau of the Census

FIGURE 1.8

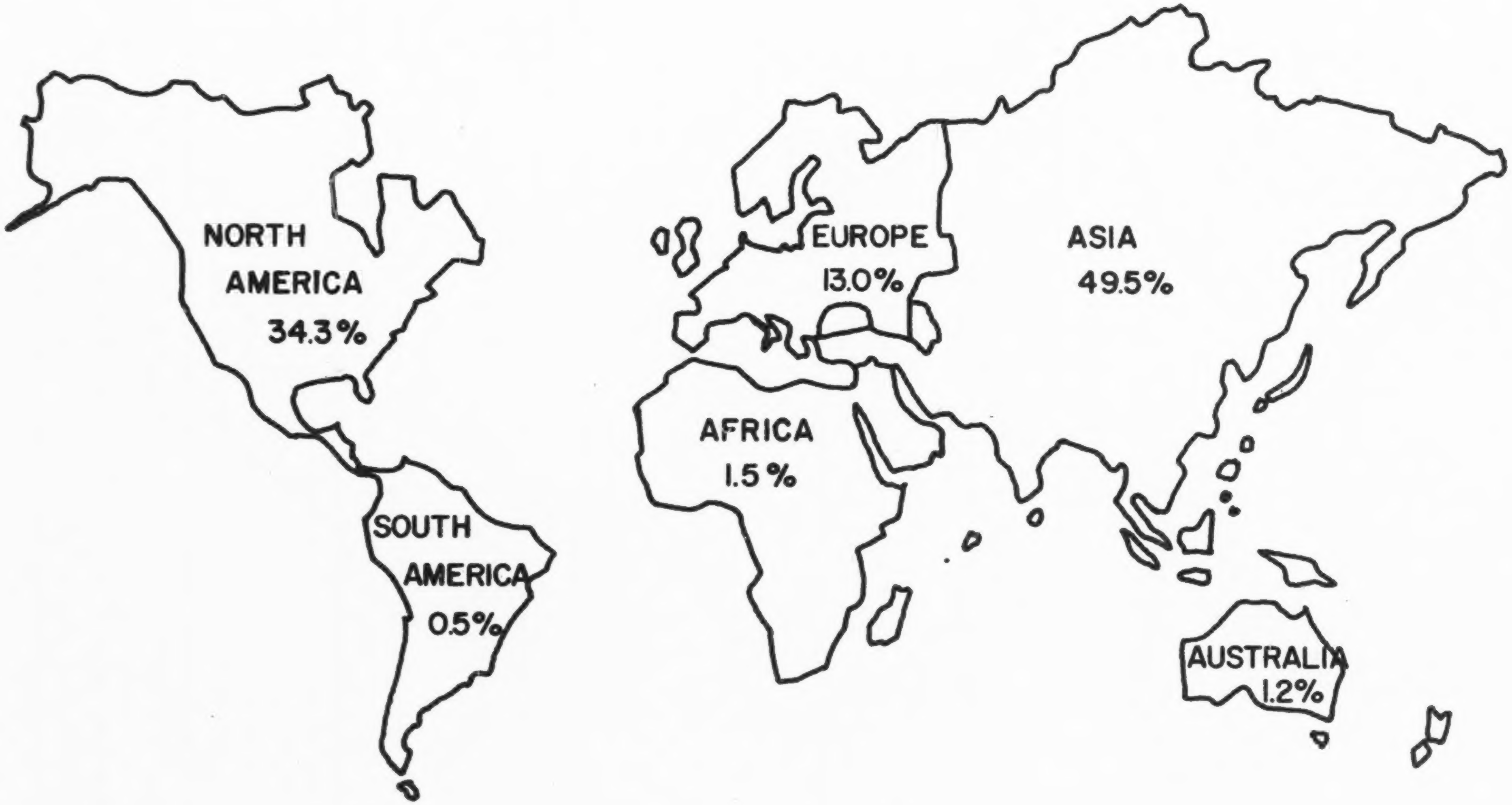
TOTAL REFUSE PRODUCTION IN THE UNITED STATES



U. S. Department of Health, Education, and Welfare

FIGURE 1.11

PER CENT OF COAL RESERVES
OF THE WORLD

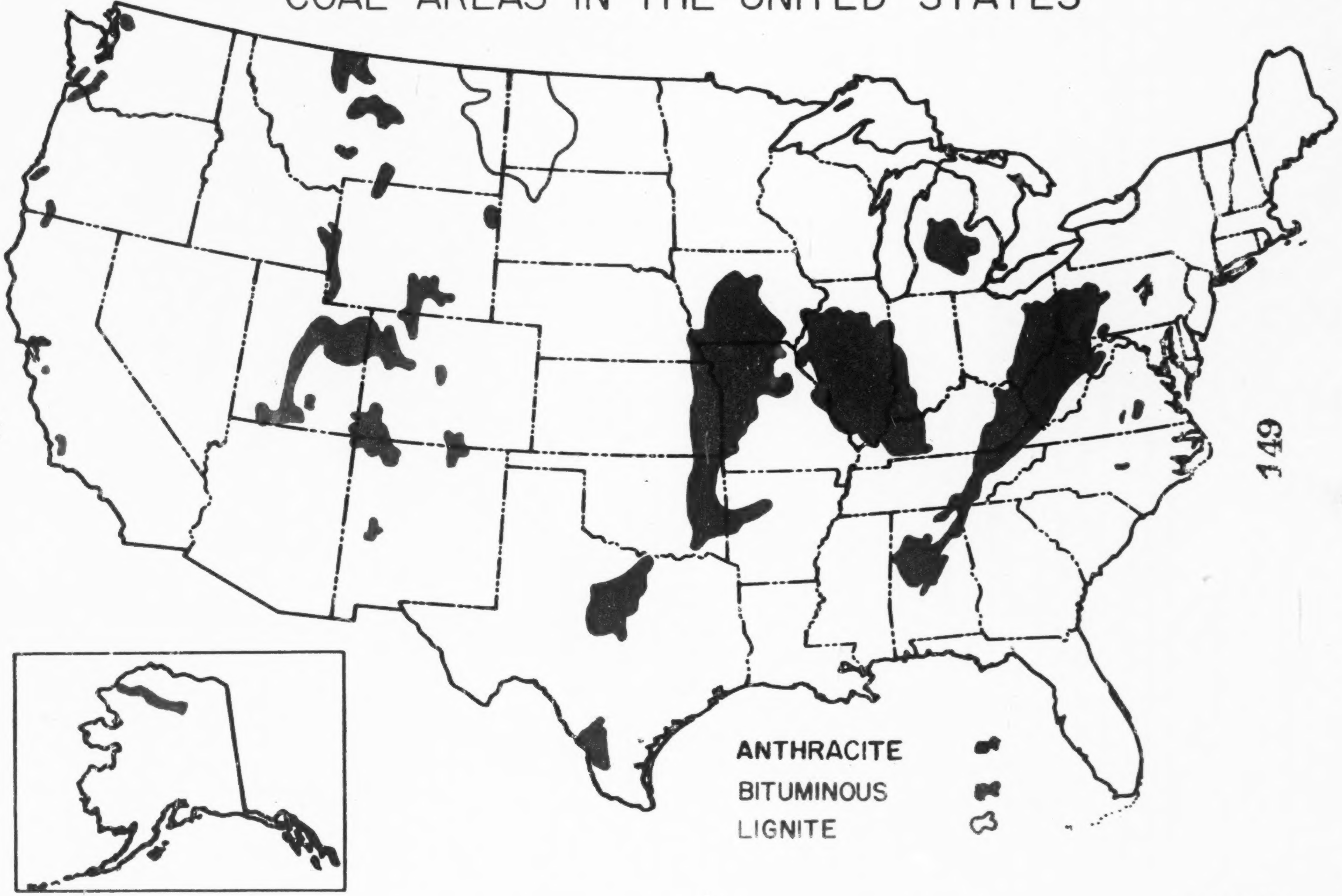

NORTH
AMERICA
34.3%
SOUTH
AMERICA
0.5%
EUROPE
13.0%
ASIA
49.5%
AFRICA
1.5%
AUSTRALIA
1.2%

SOURCE: U.S. GEOLOGICAL SURVEY

SSCSC '64
C I - ECON.

FIGURE 1.12

COAL AREAS IN THE UNITED STATES


ANTHRACITE
BITUMINOUS
LIGNITE

SSCSC-'64
CI-ECON.

16. Study the data on Figure 1.16. Now let's consider what demands increased population in the 21st century will make on the nation's natural resources.

    16.1 Given the projected growth in population of 300,000,000 people in the year 2000, what new and bigger demands will be made on the American economy?

    16.2 If income continues to increase faster than population, what effect might this have on the economic choices people make?

16 (continued)

16.3 What demands will be made on our natural resources to satisfy these new and enlarged choices?

16.4 As population and income increases, how will the demand for food and clothing compare with the demand for automobiles, education and recreation as well as other family consumption expenditures?

SECTION III

HUMAN RESOURCES IN THE ECONOMY

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BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

CONCEPTS: Human resources, population, population change

SKILLS: Interpreting, analyzing population data

GENERALIZATIONS:

1. The nation's population has continued to increase but the average age (median) has been decreasing since 1950.
2. High birth rate, declining death rate and large numbers of immigrants have given our country a rapidly growing population for many years.

Since the size of a nation's labor force is directly related to the size of its population, the instructional materials introduce students, first, to the quantitative aspect of the nation's resources. The questions and problems of interpretation and analysis of selected population data have as their objective understanding of those factors that account for rapid population growth in our economy, i.e., (1) high birth rate; (2) immigration; (3) declining death rate. 119

1. (1.1-1.10) 120

   Here we are concerned not only with population change in absolute numbers which can be gleaned from Table 1.8 but also with unequal rates of change throughout our entire history. These unequal rates of change have had a profound impact on our society as reflected in changing tastes for food, clothing, shelter, recreation and our demand for more and better education. Like economic growth, population growth is not a smooth continuous phenomenon but tends to take place in leaps and jumps which can be best seen by working out the percentage change from one period to another.

   For example, from 1800-1850, the absolute increase was 17.9 million (23.2 - 5.3) and the percentage increase was 338%. The teacher is advised to assist the student in figuring these percentages accurately. (Divide the difference between beginning and ending numbers by the beginning number, thusly,

   $$5.3\,\overline{)\,17.9}$$

   In more recent 50 year periods the percentage increase becomes smaller because comparisons are being made to a larger base number.

   However, students should also note that the increase in terms of absolute numbers is greater each 50 year period.

   (1.11-1.14) 120-121

   Here we are concerned with the average age (median) of our population. While the population has grown in absolute numbers throughout our entire history, the average age of this population began to decline in 1950 and reversed a trend that had been in evidence for more than a century. If the fertility rate (the number of children per 1000 women) remains at the 1965 level the median age is expected to continue dropping to the year 2015. A decline in the birth rate could reverse this trend.

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

WARNING: When we speak of the average age (median of our population declining in recent years, we should recall a favorite story of statisticians about the man who drowned wading across a brook that had an average depth of three feet. The unequal rates of growth in the population have been more uneven and unequal for some regions and groups than for others. Important differences, indeed, extremes in age composition of the population obtain among different regions, states, localities and even between the races. Such differences go a long way in explaining different economic needs within our country.

122 Students should be aware of the forces that caused the average age of our population to climb for over a century, i. e., increasing longevity and decline in immigration and the birth rate as well as those factors that caused the unprecedented decline in the average age since 1950, the high birth rate of World War II and the slowing down of longevity gains. Large scale immigration tended to reduce the median age of our population because the majority of immigrants were between the ages of 15 and 40. The materials on immigration follow.

123 Table 1.9 Immigration, 1820-1967.

123
119
2.1-2.4 are directed to interpretation and analysis of the data on Table 1.9 and comparisons with data on Table 1.8.

What do students suggest as the importance of the total figure of 43,976,479 for the period 1820-1967?

Do they call attention to what this means by way of broadening the base on which subsequent population growth will develop?

Note: Encourage students to examine the data thoughtfully, looking first for overall trends, and then looking within the data for significant increases or decreases by decades.

Are they able to formulate, in their own words, accurate statements about the significance of the data given in Table 1.9?

124 3. TABLE 1.10: BIRTHS AND DEATHS, 1900-1967

Here we introduce data on two additional factors that have been important historically in the rapid growth of the nation's population.

125 3.1-3.6. Thoughtful examination and analysis of these data should suggest to students that the birthrate has been irregular since 1900 but markedly higher than the deathrate which declined steadily and tapered off with minor change after 1950. It is the difference between these two rates that explains much of the population growth especially since immigration has been largely curtailed.

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

Are students aware of the trend in birthrate since 1935?

Note: Birth and death rates are always given in terms of 1,000 persons.

Increase in life expectancy reflects a declining number of deaths per thousand persons.

3.6 Do students consider these among the factors they bring to their explanation of the trends in death rate and life expectancy on Table 1.10? 125

research in medicine
new drugs
more and better equipped hospitals
more and better clinics
better trained doctors and nurses
incomes make medical services available to more of our people
reduction of infant mortality
increase in longevity of adult citizens
public health and sanitation
food inspection
labor saving equipment in home, shop, farm, and factory
nutritious food
public education with instruction in health and provision for physical education
recreational programs for all citizens
business conditions have been good
young population--early marriages

The increase in births over deaths since 1935 - 18.7 - 17.9
10.9 - 9.3
7.8 8.6

has been an important cause of population growth. The increase in life expectancy has also been an associated factor.

Example: 1966 - 73.8
1900 - 48.3
25 5 (years increase for women)

This population growth has been caused by three factors: birthrate, the deathrate, and immigration. Students should develop some understanding of the relative role and importance of each factor in the growth of our nation's population. 126

Note: Students will probably restrict their thinking to the depression as the only factor that accounts for the decline of immigration in the 1930's. An important factor here is the quota policy that the Congress adopted in the 1920's which provided for a maximum of 150,000 immigrants per year--subject to revision upwards in crisis years.

T-4

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

Up to this point in our study of Human Resources and the Economy, students have been working with data that provide a basis for identifying the major factors that have contributed in the past to rapid but unequal rate of growth in the nation's population

128 4. Here we introduce with Table 1.11 data on the composition of the
nation's population with focus on age. In questions 4.1 through 4.5,
students consider trends as well as consequences of continued population
growth at unequal rates over a period of the next half century
131 (Reading, "Population: Youth's Place in an Older But Younger Country
in 1980.") and Table 1.11 with projections to the year 2015.

128 4.1-4.4
Questions should be prepared individually in class or as homework and followed with a teacher-led discussion with attention to correct reading and interpretation of the data asked for in the questions.

135 Have students read, "The Country Grows Older But Younger" and
129-130 prepare their answer to questions 4.6 through 4.8.

Note: Questions 4.1-4.4 involve the fact that population growth like economic growth is not a smooth continuous process. Economists are concerned with "overbuilding," "lumping-bunching," of investment and its impact on the economy. Similarily, we may observe in Table 1.11 and the reading the "bunching" of population--lean and fat years--which result from uneven fertility, death, and immigration rates and which exert a powerful influence on the economy.

129 4.5 Here we are concerned with the relationship between population and the functioning of the economy. If, for example, the young and old age groups increase five times faster than the working population such as occurred in the intercensal period, 1950-60, there will be a shift in kind and quantity of goods and services demanded, indeed, a reallocation of productive resources. The reason for this is that the young and the old have different quantitative and qualitative needs than the middle age group, as evidenced by the rapid increase in educational facilities and health care facilities for the aged in recent years.

It is extremely important that students begin to realize that the current pattern of purchases of final goods and services and of resource production is in large measure governed by demographic or population forces that were operative as far back as the last century and over which they have no control. Demographic forces operative today such as unequal fertility rates, death rates, and immigration will continue to confront future generations with economic constraints until they have run their full course. Perhaps this is what historians mean when they say "men make history but history makes men."

Note: Continuing with question 4.5, do student responses suggest that they perceive the economic benefits as well as the economic problems that accompany rapid population growth? Also, can students trace the relationship between changing demand for final products and resources required to produce them? Listen without "telling."

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

Consider with students the alternative sources of accurate information 129
on each kind of change associated with population growth for the state
and local community and the private business. (See What Does Our
City Consume, p. 13, Student Manual) 13

You may decide that this is the "teachable moment" to have the class select an important anticipated change for the local community or state in the 1980's and plan for further exploration of the nature and consequences for the community. If the problem is one of obtaining additional and improved educational services, the class may arrange for the superintendent of schools and/or a member of the board of education to meet with the class. If population growth in the decades ahead poses a problem of recreational areas or zoning, a member of the city planning commission and/or city council might meet with the class or be interviewed by representatives of the class. If population growth necessitates the production and sale of entirely new goods, you may wish to have a member of the business community discuss with the students how the private sector of the community's economy anticipates and provides for the new and enlarged choices of its households.

Or, students may work in small groups with each group taking a major problem resulting from population growth as concerns the local community, interview informed persons, organize and prepare their findings to the class. Interviews, indeed, the final report as prepared by the group might be tape-recorded and played back to the class and used in subsequent years as a record against which future students can compare community responses to the current increase in population.

4.6, 4.7, 4.8 129-130
In the student reading, "The Country Grows Older But Younger," it 135
was demonstrated that there are important differences in the age composition of the population among the states and between the races. In selecting a particular community problem for study, students should be aware of peculiar or special circumstances that may be operative in their community. For example, if the community is predominately Negro, the median age of its population is likely to be substantially lower than the surrounding white community and hence have substantially different economic needs such as educational and child care facilities, parks and recreational areas. Just the opposite problem and hence economic needs exist in many California and Florida communities that have attracted large numbers of senior citizens.

4.9 The reading, "300,000,000 Americans Would Be Wrong" is included 138
here to provide another position on the projected population of 300 million in the Year 2000. Have students read the article and then conduct a class discussion of Mr. Lilienthal's thesis and the reasons he gives in support of his position. Do students agree? Disagree? For what reasons? Also, see the most recent projection on Table 1.11 for the year 2015.

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

CONCEPTS: Labor force, composition of the labor force, change, scarcity

SKILLS: Interpreting selected population and labor force data, making and checking inferences, formulating generalizations, using current data to project and check occupational trends

ATTITUDE: Concern about wanting to act in accordance with one's convictions about the importance, use, and development of our nation's human resources.

141 Having examined those factors that contribute to population growth--excess of births over deaths, immigration, and increasing longevity, now we introduce the concept of the labor force. Given the nation's population, what determines the size of the labor force? To answer the question, students will work with population data identifying groups not included in the labor force. By eliminating all those groups not included in the labor force, students should perceive what determines who is, and who is not a member of the labor force.

Prior to work with the materials in the Student Manual, ask students to consider these questions:

WHO DOES THE WORK THAT IS REQUIRED TO FEED, HOUSE, CLOTHE, AND TRANSPORT 200 MILLION AMERICANS THIS YEAR? HOW MANY DOES IT TAKE TO PROVIDE ALL THE GOODS AND SERVICES THAT WE'LL CONSUME THIS YEAR?

List student responses on the board. Make no corrections at this point. You are attempting to get some indication of students' perception about members of the nation's labor force. Take only a few minutes.

These were responses made by one class: 1. persons with ideas; 2. skilled people; 3. people who want to get ahead; 4. high school and college graduates.

141 8. Have students open their manual to page 141 and study the data given in Table 1.12--HOW IS THE NUMBER OF PERSONS AT WORK IN 1950 DETERMINED?

They'll probably see immediately that certain groups are excluded and subtracted from the total population for 1950. Space is provided for groups included; groups excluded.

BASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

How are these data collected? Since this is an excellent example of sampling, the teacher might take time to explain to the class how the U. S. Bureau of Census collects labor force data. Information is provided below.

During the calendar week of each month in which the twelfth day falls, Census Bureau workers interview 35,000 households in 357 sample areas comprising 701 counties and independent cities with coverage in each of 50 states and the District of Columbia. These sample areas are carefully selected. Figures on the number of men in the armed services are obtained from the Defense Department.

THE EMPLOYED: WHO IS COUNTED AS EMPLOYED?

1. Those persons who during the survey week did any work for pay or profit;
2. Those persons who worked one or more hours without pay on a family farm or business;
3. Those persons who have a job but are not working during the survey week for any one of these reasons: on vacation; temporarily ill; bad weather; industrial disputes or strikes.

THE UNEMPLOYED: WHO IS COUNTED AS UNEMPLOYED?

1. Those persons laid off temporarily but who have been told they will be called back shortly;
2. Those persons who have accepted a new job but who have not reported immediately for work;
3. Those persons out of a job and who state they are actively looking for work.

WHAT GROUPS ARE EXCLUDED IN COMPUTING THE LABOR FORCE?

1. Housewives engaged in their own housework
2. Students in school
3. Persons unable to work because of long-term illness--mental and/or physical
4. Retired persons
5. Persons reported as too old to work
6. Persons voluntarily idle
7. Seasonal workers for whom the survey week fell in an "off" season
8. Persons doing incidental work--less than 15 hours of unpaid family work
9. Persons under 14 years of age

WHO IS INCLUDED IN THE CIVILIAN LABOR FORCE?--the sum of all civilians classified as employed or unemployed.

WHO IS INCLUDED IN THE TOTAL LABOR FORCE?--THE CLF PLUS The Armed Forces.

BASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

142 9. Scrambled data for computing the labor force in 1960 is provided on page 140 in the Student Manual.

Have students determine the correct figures of:

1. The Total Labor Force (TLF) in 1960
2. The Civilian Labor Force (CLF) in 1960
3. Employed Persons in 1960

141 Table 1.12 provides a form for preparing accurate computations. Have students make their computations without calling this to their attention in the first steps. We strongly urge that they follow the form provided in Table 1.12, page 141, so they consciously work through the process of excluding certain groups of individuals from Total Population learning that we arrive at TLF and CLF by working with the total population figure as a base point.

The Table may be set up on a page in the student's notebook and inserted in the manual.

Answers:
TLF--71.2 million
CLF--68.7 million
Employed--64.8 million

143 10. Now have students lay the two tables side by side to note similarities and differences in the labor force data for 1950 and 1960.

143 11. Table 1.13--Labor Force of the United States, 1890-1980.

FIGURES FOR POPULATION AND LABOR FORCE ARE GIVEN FOR THE YEARS, 1890-1980. EXAMINATION OF LABOR FORCE FIGURES BY DECADES SHOW GROWTH IN POPULATION. HERE STUDENTS DETERMINE THE LABOR FORCE AS A PERCENTAGE OF THE POPULATION FOR THESE DECADES.

Points to be noted here include:

1. the labor force has grown steadily over this period of time as has the population,
2. the labor force as a percentage of population ranges between 52.2% and 55.4% of the population 14 years and over for this seventy-five year period. It is expected to rise to 58.2 by 1980.

143 12. Perhaps students will suggest that for some reason we have been able to produce the goods and services with no more than 59.7% of the population 14 years and over thus releasing approximately 40% of the population to do other things.

III

BASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

You might ask what difference this makes; i.e., increased opportunity for education before entering the labor force; earlier retirement and leisure.

Some student might shift the discussion to reasons, i.e., the impact of technology. This will be dealt with later in our consideration of capital equipment.

Answers
Table 1.13

Labor as % of Population:

1890 - 52.2
1900 - 53.7
1920 - 54.4
1930 - 53.2
1940 - 52.7
1950 - 54.0
1960 - 55.3
1965 - 55.8
1970 - 57.3
1975 - 57.5
1980 - 58.2

13.1 The data clearly shows men entered earlier and left the labor force later in 1900 than in 1960. For example, approximately 70 percent of men, 14-20 years, were in the labor force in 1900 whereas this figure dropped to 43 percent by 1960. More recent data indicate that this figure is continuing to drop. Roughly the same condition prevailed with respect to the older age group 65 and over. 145

The same general trend exists for women but the change is less spectacular because of an overall increase of women in the labor force.

13.2 Figure 1.17 shows clearly that a higher percentage of men for all age brackets participated in the labor force in 1900 than in 1960. The picture is just the reverse for women. There has been an enormous increase in the number of women in the work force at all ages except the extremes. Like the men, they tended to enter the labor force at an older age. 144 145

13.3 Figure 1.17 clearly shows men tended to leave the labor force at a much earlier age in 1960 than in 1900. In 1900, 68.4 percent of the men over 65 years were still in the labor force. This figure dropped to 30.6 percent or less than one-third by 1960. In striking contrast, women tended to leave the labor force at a later age in 1960 than in 1900. This reflects an overall increase of the number of women in the labor force between 1900 and 1960. It also may reflect the fact that women have a longer life span. 144

13.4 Similarities and Differences of Women in the Labor Force, 1900-1960: 145

Similarities: The major similarity is that the percentage of women in the labor force for both 1900 and 1960 is considerably below that

BASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

of men which reflects an almost universal value that men are the financial mainstay of the family.

Reasons: The major reason is cultural. Men in American families are the breadwinners.

(Fig. 1.17) 144 Differences: The major difference has been a substantial increase in the number of women in the work force between 1900 and 1960. In 1960 Figure 1.17 clearly shows that women, unlike men, tended to participate in two different peak age groups in 1960--ages 21-24 and 45-54 years of age.

Reasons: The differences are much more difficult to explain because they are the result of both economic and cultural forces operative in the American society from 1900 to 1960. Some of the factors include:

- CHANGE IN THE STATUS OF WOMEN which enables women to perform a greatly enlarged number of work tasks;
- EDUCATION which enables women to qualify for a wider range of jobs outside the home;
- RAPID INCREASE IN SERVICE INDUSTRIES and educational facilities that are particularly well suited for female workers. The majority of employment in education is women strongly influenced by compulsory education and the greatly expanded educational services for all ages from the cradle to the grave have created enlarged opportunities for women in the labor force.
- TECHNOLOGICAL REVOLUTION that occurred between 1900 and 1960 enabled many more women to participate in the labor force.
- CHANGE IN THE TYPE OF FINAL GOODS demanded by Americans in 1900 and 1960 encouraged greater female participation. The movement from heavy to light final products particularly in the field of electronics (appliances).
- INCREASED ACCEPTANCE OF DIVORCE BY AMERICANS has contributed to the large increase of women in the labor force.

146 13.5 The major similarity between the pattern of participation of men in the labor force in 1900 and 1960 is that men account for the bulk of the labor force, that is, they are the principal breadwinners in American families.

The relatively higher rate of participation of men in the labor force in both 1900 and 1960 was explained by cultural factors in the preceding No. 13.4 above.

BASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

The differences were much less spectacular for men than women as indicated in Figure 1.17. The major difference in the case of the men is their relatively lower rate of participation in 1960 than in 1900 for all ages. The reasons for these changes are complex and tend to reflect a rapid rise in the productivity of both men and women. Reasons that should be considered include: 144

- EDUCATION--the higher level of education required by American industry to qualify for employment caused workers to enter the labor force at a later age;
- PRODUCTIVITY--the increase in productivity made possible by this higher education and improved technology made it possible for workers to leave the labor force at an earlier age without loss in production;
- WOMEN IN THE LABOR FORCE--the lower rate of participation for men not only reflects an increase in their productivity but must be explained, in part, by the large increase of women in the labor force. There has been a marked increase in the number of American families where both the husband and wife are employed. Also, many women breadwinners make it possible for their male children to remain in school and thus enter the labor force at a later age. So there tends to be a close connection between changes in the pattern of participation of both men and women in the labor force. It is expected that there will be a substantial increase of women in the labor force during the next 20 years, particularly in the age bracket 35-60.

13.6 The two major differences between men and women in the labor force in 1960 are: (a) the bulk of the labor force consists of men who account for approximately two-third the labor force; (b) the participation of women varies more than for men during the most productive years, 18 through 64 years. 146

Reasons: The relatively larger participation of men is due to cultural factors discussed above in No. 13.5. The wider variation in the participation of women in the labor force reflects their dual role as mothers and wives which encourages them to leave the labor force during the child bearing years, 21-30 years of age, and return reaching their highest rate of participation in the 45-54 year age bracket. Their ability and willingness to reenter the labor force in 1960 in the 25-45 age bracket, is the result of many important changes that took place in the American society between 1900 and 1960. The more important of these factors were discussed in the preceding section.

BASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

(Fig. 1.18) 147

148 14. Figure 1.18 portrays the participation of men and women in the labor force not only by age as in the preceding Figure 1.17, but also by color or race.[1] The introduction of color or race results in some important difference in the levels and pattern of participation in the labor force. The student should examine Figure 1.18 keeping in mind the pattern of participation of men and women in the labor force that was examined on pages (see p. 145-6) in order to focus on the major differences in Figures 1.17 and 1.18.

148 14.1 The principal difference between white and non-white males is that the non-white have a lower rate of participation throughout all the age brackets.

Reasons: Social scientists differ greatly about the reasons for this lower rate of participation by the non-white. This reflects, in large measure, the imperfect knowledge of the American Negro who makes up the bulk of the non-white element of the population.

Reasons which are most often cited include: lack of job opportunity for non-white males, rising educational requirements in the American economy which Negroes tend to lack, and multitudinous practises of discrimination that tend to keep non-whites from participating meaningfully in the labor force.

148-149 14.2 In striking contrast to the non-white male, the non-white female participates at a higher level than the white female for all age brackets except the earliest, ages 14-19.

NOTE: Figure 1.18 indicates that the white females in the youngest age bracket, 14-19 years, participate at a considerably higher rate than do the non-white women. However, the participation of white women in the labor force falls off rapidly in the child-bearing ages of 20-30 years, whereas, the rate of participation of non-whites continues to rise until it reaches a peak in the 40-49 year old bracket. White women tend to reenter the labor force in the 30-39 years of age, reaching peak participation in the age bracket 49-50 years.

The major difference, then, in the participation of white and non-white females is that the non-whites do not leave the labor force during the child bearing and rearing period.

Social scientists are also in disagreement as to the reasons for this strikingly different pattern in the participation of white and non-white females in the labor force. Still, there appears to be substantially more agreement in the case of the non-white women than for the non-white male.

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[1] The U. S. Bureau of the Census defines non-white as follows: the Negroes, American Indians, and people designated as "Orientals."

The overwhelming majority of non-white is Negro.

T-13

ASIC UNDERSTANDING: THE QUANTITY OF LABOR AVAILABLE TO AN ECONOMY IS NOT FIXED. IT DEPENDS ON THE SIZE OF POPULATION AND THE PERCENTAGE OF POPULATION IN THE LABOR FORCE AT A GIVEN TIME.

Reasons: There is increasing evidence that the non-white female, especially, the Negro, experiences less difficulty in finding employment than does the non-white male. There are a number of reasons for this but education and the heavy demand for paid domestics play a dominant role.

As noted earlier (and developed in the sections that follow), the growth in the American economy has been accompanied by an even faster demand for better educated workers. Apparently, this does not apply as much in some of the service industries such as domestic housework, restaurants and food services, nurses aids--all of which have attracted non-white females, particularly Negroes. 144

In Figure 1.17 we observed that between 1900 and 1960 the rate of participation of men in the labor force declined for all age groups and the number of women in the labor force increased for nearly all age groups. It was suggested that the lower level of participation for men was made possible, in part, by the increased number of women that enter the labor force. 147

In Figure 1.18 we observed a similar relationship. Where the level of participation of men is relatively low, as in the case of non-white males, the percentage of non-white females in the labor force is relatively high. Just the opposite relationship exists with the white participants in the labor force.

It was suggested in the preceding section that the non-white female experiences less difficulty than the male in finding employment. The Moynihan Report[1] suggests that the reasons are even more complex and have to do with the unique structure of the contemporary Negro family in America. The Report suggests that historically the Negro mother has played an unusually important role in the operation and maintenance of the family and historically she has been viewed as the principal breadwinner. To the extent that this is true, cultural factors must be considered along with economic forces in explaining the high and increasing level of participation of non-white females up to the middle age group, 40-49 years of age.

Recent projections indicate that there will be a slight drop in the participation rate of non-white females during the child bearing years but this will be more than offset by the higher participation of all females in nearly all age brackets by 1980.

NOTE: The value of having students examine the labor force by color is that this unique pattern which obtains among non-white females is 144
completely concealed when all classes are lumped together as in 147
Fig. 1.17.

The Figure 1.18 suggests that the non-whites, especially females, are not similarily situated with whites in the labor force, and that special forces are operative to explain the different results. 150-1

141

15. Reading "Men and Women in the Labor Force." 143
Tables 1.12, 13- Figures 1.17, 1.18 to prepare generalizations 144

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[1] Daniel Patrick Moynihan. The Moynihan Report and The Politics of 147
Controversy (Cambridge: MIT Press, 1967). III

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY.

16. Having examined the composition of the labor force in terms of (a) size/trends, (b) age, (c) sex composition, (d) race, we examine here the quality of the labor force in terms of education.

154 The reading, "Educational Trends and the Labor Force," page 154,
and Figures 1.19--Median Years of School Completed by Major
156 Occupational Group, March 1962, and Figure 1.20 "Between 1960
157 and 1970, 26 Million Youth Will Enter the Labor Force" provide the
data for student preparation and discussion of questions 16.1, 16.2
158 and 16.3.

160 17. Table 1.14 presents important data on the occupational distribution of the nation's labor force for 1920, 1940, 1960, 1964, and a projection for 1975.

160- 17.1, 17.2, 17.3
161 Students should view these data as more than a table of percentages.
Actually, they should be considered in terms of what they tell us
American people wanted of the economy in the years 1920 through 1964.
For example, Americans wanted more of those goods and services that
required the services of professional and technical workers, managers,
clerical workers, sales workers, operatives and service workers.
There was declining demand for those persons classified as craftsmen,
farmers and farm laborers. Students should examine the data on
160 Table 1.14 and also on Figure 1.21. It is very important that they
159 note and understand the reasons for the increase in employment in
service industries, the leveling off of employment in manufacturing,
and the impressive decline of workers in agriculture in the period
1930-65.

162 17.6 In thinking about the occupational data in this way, students should begin to understand that the values of members of households influence importantly occupational distribution. Households that value housing, health, education, recreation are influencing and making demands on the economy's labor force to provide the labor, skill, and know-how necessary to produce the goods and services which make it possible for households to achieve their personal and public goals.

8a This might be a good place to refer to the Family Consumption Expenditure Profile prepared earlier and have students consider the relation between consumption expenditures of American households and the occupational distribution of the labor force.

161 17.5 Not only do these data on Table 1.14 present a profile of the labor
force, classified by occupations, they also provide a basis for students
to consider trends in occupational distribution over time as well as
projected trends for 1975. Here students should work with Table 1.14,
Figures 1.20 and 1.21 to identify the occupational classifications that
changed most and those that changed least, reasons for change in
occupational distribution 1920-64, and consequences for members of
the labor force. In examining the projection for 1975, what do
students see as the implications for themselves as young workers
entering the labor force in the next decade? Figures 1.20 and 1.21
should be reexamined, along with the reading "Projections of
162 Occupational Requirements."

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY.

17.10 SUMMARY: WHAT ARE THE PRINCIPAL CHARACTERISTICS OF AMERICA'S HUMAN RESOURCES?

This summary should be developed individually by students prior to discussion. It may be prepared as an essay or you may prefer to have students prepare a series of statements in which they state what they now consider to be the principal characteristics of America's human resources.

This lends itself to small group pupil consultation to select several essays or statements to be reported to the large group and used as a basis for discussion and further revision.

Here you are interested in student responses that indicate perception of the following important understandings about human resources. Students, of course, will not and are not expected to use this terminology but these are understandings you should be looking for.

HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY

Human resources are limited relative to the demands made on them to produce goods and services.

Human resources can be used differently in the production of goods and services.

The quantity of labor available to an economy is not fixed. It depends on the size of population and the percentage of population in the labor force at a given time. The rate of participation in the labor force itself is a function of the peoples' ever changing values.

The quality of a nation's human resources is determined by the length and kind of education and vocational preparation, health, ability, and willingness to adjust to change.

Representative statements taken from student papers follow:

1. "Human resources vary in quantity and quality."
2. "Human resources are limited. We do not have workers prepared to fill all the jobs."
3. "Human resources can be used in different ways. Women can be educated to be housewives, work in an office or teach school."
4. "Human resources can be improved with education."
5. "Human resources have ideas--they are the only resources that do."
6. "Human resources in our labor force, 20-64 years of age, are supporting two pillars. One pillar is our large number of children and young people and the other pillar is our retired workers and old people."

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY.

7. "Human resources must be educated."
8. "The quality of our human resources is dependent on the creativity of our people, their education, and health."
9. "As our human resources develop ideas, they gain control over their environment."
10. "Increases in our human resources use up more of our other resources."
11. "The number of women in the labor force is increasing with one-third of our labor force today made up of women."
12. "The size of the labor force depends on the size of our population and the number of people in those groups that are not included by the Bureau of the Census when they make their survey of households."
13. "The labor force is always changing to suit the public - workers move out of unskilled into service and skilled jobs and go to those places where the jobs are."

SUMMARY: Human Resources in the Economy in the Year 2000

116 Here we use again for an interim summary on human resources Figure 1.16, Increased Population: New and Bigger Demands on the Nation's Resources, which graphically relates the human resources we have been discussing to the natural resources, to some of the final products and to total output or Gross National Product. In between the natural resources and final goods shown on the base of Figure 1.16 are the human resources classified as population, labor force, and households that combine these resources "mixing" their skill, know-how, and ideas with the natural resources to produce the economy's final products.

166 18.1 The interrelationship of a nation's human and natural resources is of tremendous importance--how human choice of goods and services makes continuing and new demands on both the nation's natural and human resources, and the consequences for the allocation and use of the nation's human and natural resources to achieve given economic goals of a nation's people. Are students beginning to perceive the interrelationships set in motion by the choices a nation's people make?

166 18.2 Here we are concerned with the impact of a greatly enlarged population in the year 2000, estimated to be 300,000,000, and a labor force estimated to be 142,000,000 on the American economy. A population of 300 million, even without any change in consumer or producer preferences, will not only require enormous increases in the natural resources used to produce it's final goods and services but it will also require substantial additions and change in the composition (age, sex, occupation, education) of the labor force to produce the final goods and services desired by the greatly enlarged population and its

BASIC UNDERSTANDING: HUMAN RESOURCES ARE LIMITED AND CAN BE USED DIFFERENTLY.

increased number of households, (See Figure 1.17, p.144). Also, 144 we are concerned with quality changes in the labor force, that is, workers prepared educationally and skill-wise to do different things and to do them differently. Peoples' choice of final products "pulls" certain resources into production. Health, education, pollution control, and welfare make different demands on the nation's labor force than do automobiles, three dimension television, stereo equipment, and the race to the moon. Hence, the importance of different economic choices of households in their impact on the nation's human resources in the decades ahead.

18.3 Throughout American history income has increased faster than the 166 rate of population. This has permitted a continuous enlargement of economic choices and an impressive improvement in our level of living for more and more of our people. In 1966, half the families in the United States earned more than $7000. (See Table 1-- 5 Estimated Family Median Income for 1968). Family incomes have gone up more than 60 percent since 1947. As noted in an earlier section of these instructional materials, food clothing and shelter claim a smaller percentage of family income (about half in the average urban family) making more money available for discretionary spending and making it possible for more people to achieve goals for quality living impossible of achievement for many in earlier periods in our history. For example, consider our peoples' preference for educational services. An estimated 15 million boys and girls will surge into the nation's secondary schools by 1980. Also, there has been an impressive increase in the number of college graduates in the decade, 1955-65, representing a significant investment in and improvement in the quality of our human resources. (See Charts A-B, page 17--Projected 17 Enrollment Demands for Higher Education in Illinois.) In 1965, 539,000 bachelor's and first professional degrees were awarded, a gain of 100,000 in just three years and of more than 250,000 since 1955. In 1965, a little over half the high school graduates in the country went on to college with the percentage ranging from as many as two-thirds of the graduates in States with a well-developed system of free or inexpensive higher education to as few as one-third in States with inadequate facilities for higher education. For poor and even middle-class boys and girls in States without ready and inexpensive opportunities for higher education, lack of funds was a major deterrent to college attendance. The establishment of many new colleges supported by States and local governments and Federal facilities grants as well as new financial aid programs for college students, is making post-high school education much more widely available.[1]

It is important that students understand and establish relationships among these changes in the preparation of our human resources who ultimately, in most cases, enter the labor force in response to the preferences of households for goods and services.

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[1] Manpower Report of the President. U. S. Department of Labor, April 1967, p. 167.

POPULATION GROWTH AND ECONOMIC CHANGE

1. People make a nation. Study the population figures for the United States given in the table below and enter your answers to the questions asked of these data in the space provided.

TABLE 1.8

POPULATION OF THE UNITED STATES, 1790-2015

Year	Total	Median Age
1700	275,000	NA
1710	358,000	NA
1720	474,000	NA
1730	655,000	NA
1740	889,000	NA
1750	1,207,000	NA
1760	1,610,000	NA
1770	2,205,000	NA
1780	2,781,000	NA
1790	3,929,000	NA
1800	5,297,000	16.0(1)
1810	7,224,000	16.0(1)
1820	9,618,000	16.7
1830	12,901,000	17.2
1840	17,120,000	17.8
1850	23,261,000	18.9
1860	31,513,000	19.4
1870	39,905,000	20.2
1880	50,262,000	20.9
1890	63,056,000	22.0
1900	76,094,000	22.9
1910	92,407,000	24.1
1920	106,466,000	25.3
1930	123,188,000	26.4
1940	132,594,000	29.0
1950	152,271,000	30.2
1960	180,684,000	29.4
1961	183,756,000	29.1
1962	186,656,000	28.8
1963	189,417,000	28.5
1964	192,119,000	28.2
1965	194,583,000	27.9
Projected (2)		
1970	207,326,000	27.2
1975	223,785,000	26.9
1980	243,291,000	26.8
1985	264,607,000	26.8
1990	286,501,000	26.8
1995	309,830,000	26.4
2000	335,977,000	26.3
2005	365,254,000	26.4
2010	396,012,000	26.6
2015	430,197,000	26.7

(1) White Population

(2) Years 1970-2015 based on Series B population projections. The high projection (A) for the year 2015 is 482,074,000 and a median age of 24.8; the low (D) is 324,387,000 and a median age of 32.1 yrs. Assumptions as to future fertility rates account for different population and median age estimates.

Source: Economic Almanac. National Industrial Conference Board, 1967-68. Future years compiled from Current Population Reports, Series P-25, No. 381 and 388. NA = Not Available. Compiled by SSCSC

POPULATION GROWTH AND ECONOMIC CHANGE

1.1 How many years did it take the English Colonies in North America to get a population of one million people living at the same time?

1.2 What happened to the population of the United States after 1776?

1.3 What happened to the population of the United States in:

–the first half of the nineteenth century (1800-1850)?

–the second half of the nineteenth century (1850-1900)?

–the first half of the twentieth century (1900-1950)?

1.4 In what decades (1790-1965) did the population increase the most?

1.5 In what decades (1790-1965) did the population make the least growth?

1.6 How many times had the U. S. population in 1965 increased over that of 1850?

1.7 How long did it take for the United States to get a population of a hundred million people living at the same time?

1.8 How long did it take to get a population of two hundred million living at the same time?

1.9 Will it take more or less time to get the third hundred million people?

1.10 During the early national period in our nation's development (1790-1830), the average age of our population was young. What was it in 1800?

1.11 What happened to the average age of our population during the next 166 years (1800-1966)?

1.12 What has happened to the average age of our population in the years 1950-1965?

1.13 What is expected to happen to the average age of our population between now and the Year 2015?

1.14 What importance, if any, do shifts in the average age of the population have for our nation?

1.15 Table 1.8 indicates that the median age might increase or decrease by the year 2015. What could bring this about?

TABLE 1.9

IMMIGRATION: 1820-1967

Period	Immigrants	Period	Immigrants
1820-30	151,824	1931-40	529,431
1831-40	599,125	1941-50	1,035,039
1841-50	1,713,251	1951-60	2,515,479
1851-60	2,598,214	1961	271,000
1861-70	2,314,824	1962	284,000
1871-80	2,812,191	1963	306,260
1881-90	5,246,613	1964	292,248
1891-1900	3,687,564	1965	296,697
1901-10	8,795,386	1966	323,040
1911-20	5,735,811	1967	361,272
1921-30	4,107,209		
		Total 1820-1967	43,976,479

Source: Statistical Abstract of U. S. 1968.

2.1 In what decades did the largest number of immigrants come to the United States?

2.2 In what decade(s) did the smallest number of immigrants come to the United States?

2.3 Compare your answer to 2.1 with your answer to 1.4

2.4 Compare your answer to 2.2 with your answer to 1.5

2.5 What was the importance for the nation of this immigration?

2.6 Why was the flow of immigrants to the United States drastically curtailed after 1920?

3. The data supplied in Table 1.10 deals with the number of births and deaths for the period 1900-1967. When reference is made to this kind of data the number of births and deaths is in terms of so many births or deaths per thousand people in the nation's population.

TABLE 1.10

BIRTHS AND DEATHS: 1900-1967

Year	Births (Per Thousand population)	Deaths Per Thousand population)	Life Expectancy (at birth, in years)	
			Male	Female
1900	32.8	17.2	46.3	48.3
1905	—	15.9	47.3	50.2
1910	30.1	14.7	48.4	51.8
1915	29.5	13.2	52.5	56.8
1920	27.7	13.0	53.6	54.6
1925	25.1	11.7	57.6	60.6
1930	21.3	11.3	58.1	61.6
1935	18.7	10.9	59.9	63.9
1940	19.4	10.8	60.8	65.2
1945	20.4	10.6	63.6	67.9
1950	24.1	9.6	65.6	71.1
1955	25.6	9.3	66.6	72.7
1956	25.2	9.4	66.7	73.0
1957	25.3	9.6	66.3	72.5
1958	24.6	9.5	66.4	72.7
1959	24.3	9.4	66.5	73.0
1960	23.7	9.5	66.6	73.1
1961	23.3	9.3	—	—
1962	22.4	9.5	—	—
1963	21.7	9.6	66.6	73.4
1964	21.0	9.4	66.9	73.7
1965	19.5	9.4	66.8	73.7
1966	18.6	9.5	66.7	73.8
1967	17.9	9.3	—	—

Source: Twentieth Century Fund 1964 and Data for 1963-67 From *Current Population Reports,* Series P-25, No. 388.

POPULATION GROWTH AND ECONOMIC CHANGE

USING THE DATA GIVEN IN TABLE 1.10

3.1 Compare the nation's birthrate in 1967 with 1900; with 1935. What do these data tell you?

3.2 Compare the nation's death rate in 1967 with 1900.

3.3 What do these data on Table 1.10 tell you about the nation's birth and death rate for the period, 1900-1967?

3.4 How many years could a male child born in 1900 expect to live? ________
How many years could a male child born in 1966 expect to live? ________
Locate the year nearest your year of birth and determine how long you can expect to live. ________

3.5 Compare the life expectancy of a female child born in 1900 and 1966 with that of a male child.

3.6 What reasons can you give for the trends in death rate and life expectancy, 1900-1966, on Table 1.10?

3.7 Specialists in the United States Bureau of Census have some important things to say about our nation's population growth in the reading, "Our Growing Population," pages 126-127. What, according to these experts, were the principal factors that account for the rapid growth of population in our country?

OUR GROWING POPULATION[1]

The 1960 census takers counted over 170 million people--some 28 million more than were counted by census takers 10 years before. The increase is the greatest by far in any 100 year census period in our history and represents more people than were counted in any census before 1860.

Provision for a regular census, to be taken every 10 years, was made by our Founding Fathers in the United States Constitution, as approved by the States in 1788. The first census was taken in 1790 and succeeding ones in the years ending in "0." The census taken in 1960, therefore, was the 18th decennial census of population.

Census figures show that our population has increased during every 10-year period from 1790 to 1960.

The percent, or rate, of increase was very high during the early years of our Government when the population was small. Each census from 1800 to 1860 showed gains of more than 32 per cent. Thereafter our population continued to grow but at a slower pace. This is quite apparent when we compare the very early period, 1790-1800, with the 1950's. The Census of 1800 showed an increase of somewhat over 1 million people or some 35 per cent over 1790. The 1960 Census, on the other hand, with its 28 million gain over 1950, represented an 18-1/2 per cent increase. The rise, however, is the greatest rate increase since the 21 per cent registered in the 1910 Census.

The total numbers, as well, the increases have been striking. With only a few exceptions the increase in population shown in each census report from 1800 on has been greater than the preceding one. And the exception, it should be noted, occurred during periods of great stress in our country's history. The 1870 and 1920 Censuses covered periods when the Nation was at war. The 1940 Census encompassed most of the period that has been called the great depression. Oddly, the 1950 Census, which covered the years of the Second World War, showed a great increase in population--it showed, in fact, the second greatest increase in numbers in our history.

Basically how quickly or how slowly the population grows depends on the number of births and deaths taking place. Unfortunately, records for the country as a whole on this subject do not extend very far back. Population experts have estimated, however, that during the early years of the last century, before such figures were collected, there were 55 births and 25 deaths each year for every 1,000 persons in the population. This unusually high difference of 30 had dropped to 15 by 1900 and to a low of 7 during the years of widespread unemployment and depression in the 1930's. Since 1940 the trend has been upward, and in 1960 the addition to the population once again stood at 15 (24 births and 9 deaths per 1,000 population). Main factors in this trend were the birth of 41 million babies and 16 million deaths during the 1950's.

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[1] "Our Growing Population" (Washington, D.C., U. S. Department of Commerce, Bureau of the Census Graphic Pamphlets GP 60-1.

POPULATION GROWTH AND ECONOMIC CHANGE

Until the last 40 years population increases were due both to the excess of births over deaths and to the large number of immigrants. The number of people admitted to the United States from other countries during the late 1800's and early 1900's was high both in actual numbers and in proportion to the population (see Table 1.9.

During the 1881-90 period over 5 million people flocked to our shores. This number represents a large part of the increase of nearly 13 million reported in the 1890 Census. From 1901 through 1910 almost 9 million immigrants were admitted. This is the highest total in our history. The immigration figure for the 10 years that followed was 3 million less but was large enough to be second highest.

Not all the immigrants remained here. Many returned to their homeland; some left for other countries; a small number were deported. By far the greatest number, however, did remain, and they and their offspring now constitute a substantial part of the population.

Until the 1920's immigration was almost unrestricted. In 1921 Congress passed a law limiting the number of immigrants from countries outside the Western Hemisphere. Since that year immigration has become a much less important element in our population growth.

The expansion of national territory has also had a significant part in our population growth. The opportunities for bettering one's life and for living independently offered by plentiful land easy to obtain encouraged many people to move westward, to marry young, and to raise families. The same opportunities brought many people here from foreign countries.

U. S. POPULATION: OLDER BUT YOUNGER

4.

TABLE 1.11

AGE STRUCTURE OF REPORTED AND PROJECTED POPULATION OF THE UNITED STATES, 1900-2015

Year	Total Population (in millions)	Percent of Total			
		Under 18 yrs.	18-64 Years	65 Years and Over	Median Age of Population
1900	76.1	39.7	56.1	4.2	22.9
1910	92.4	37.3	59.2	4.5	24.1
1920	106.5	36.8	58.4	4.8	25.3
1930	123.2	34.6	59.7	5.7	26.4
1940	132.6	30.0	62.9	7.1	29.0
1950	152.3	30.6	61.0	8.4	30.2
1955	165.9	33.6	57.7	8.8	30.2
1960	180.7	35.7	55.0	9.2	29.4
1965	194.6	36.2	54.5	9.3	27.9
1970	207.3	35.2	55.3	9.4	27.2
1980	243.3	35.0	55.6	9.5	26.8
1990	286.5	36.8	53.8	9.4	26.8
2000	336.0	36.0	55.6	8.4	26.3
2010	397.2	36.1	56.3	7.6	26.6
2015	431.5	36.2	55.8	8.0	26.7

Source: Compiled from United States Census of Population and Current Population Reports, Series P-25, No. 381, December 18, 1967. Future Years are Based on B Series Projections or Constant Rate of Fertility.

4.1 Study the data on Table 1.11. What has been happening to the American population under 18 years of age since 1900?

4.2 What has been happening to the American population 65 years and over since 1900?

4.3 What has been happening to the American population 18 through 64 years and over since 1900?

4.4 What have been the major forces responsible for the unequal rates of change among the above three age groups in our population?

U. S. POPULATION: OLDER BUT YOUNGER

4.5 Why are we concerned with these unequal rates of change in the American population?

4.6 What changes are expected to take place in the three major age groups during the next half century?

4.7 The reading, "The Country Grows Older But Younger" pp. 135-37, presents very important additional information about the age composition of our nation's population today. After you have completed the reading, prepare the following questions:

What are the important differences in age composition of our nation's population as concern:

States:

Smaller Political Subdivisions (County, City, Village)

Race

4.8 What is the economic significance of these differences to the individuals or groups involved or concerned?

4.9 Do your answers to 4.7 and 4.8 apply to your local community and/or state? Explain.

4. ______________________________ BENEFITS: ________________________

____

PROBLEMS: ________________________

____

5. ______________________________ BENEFITS: ________________________

____

PROBLEMS: ________________________

____

Reexamine the entries you have made on the chart above. Place a check (√) in front of those entries that will affect your state; place a (+) in front of those entries that will affect your community, including the business community.

How would you check the accuracy of your entries?

For the State	For Your Community and Business
______________	______________
______________	______________
______________	______________
______________	______________

Your teacher will help you develop a plan to investigate one or several of the problems population growth will pose for your community.

Prepare a well written report on the pages provided here of the problem selected for investigation, sources of information, findings, conclusions. If you interview local citizens you and your group may wish to tape record these interviews and incorporate them in the final report you make to your class. Are there other persons and groups who would benefit from your findings? How might you act on your findings?

U. S. POPULATION: OLDER BUT YOUNGER
Youth's Place in an Older But Younger Community 1980

Problem Investigated: ____________________

Sources of Information:

____

____

Findings:

Conclusions:

U. S. POPULATION: OLDER BUT YOUNGER

THE COUNTRY GROWS OLDER BUT YOUNGER

In 1960 the United States Bureau of the Census reported that while the population continued to grow reaching 180 million, its average age (median) actually declined for the first time in the recorded history of the United States. As the country grew older its people had become younger--its average age fell to 27.8 by 1966.

No less important, the rate of increase in the number of persons in both the youngest and oldest age groups of the population between 1950 and 1960 was five times that of the groups of intermediate ages. The number of persons under 18 years old increased 37 percent and the number 65 and over increased by 35 percent, whereas the increase in the age group 18 to 64 years was only 7 percent.[1] While the intercensal period 1960-70 has only passed the midway point the same trend seems to be still operative.

The increased number of births during and after World War II was responsible for the rapid growth of the younger group. Factors influencing the increase in the number of elderly persons were the upward trend in the number of births in the late nineteenth century, declining mortality, and immigration during the early decades of the twentieth century. While longevity continues to rise, although at a decreasing rate, it is not a sufficiently strong force to offset the effect of the increased number of births on the average age of the population.

The social and economic impact of these uneven rates of change in our population has been direct and substantial. Both the younger and older age groups have above average service requirements because of their comparatively low participation rate in the labor force. The social uprearing costs such as food, clothing and shelter of the young and the retirement costs of the old must generally be met from the current output of the middle group--18 through 64 years of age who are the productive element of the population. Recent estimates indicate that roughly $30,000 of resources are required to rear and educate a single child including college to the age of 18 in the United States.

Since such expenses are met from the current output of the middle group, the economic burden remains whether the young and the aged are financed privately or publicly. The burden stems not from the manner in which the needs of the young and old groups are financed but from the unequal rate of change in our population in recent years where resource users increase five times faster than resource suppliers.

In addition to these greatly enlarged quantitative demands made on the nation's producing labor force, important qualitative changes have also taken place in the economy as a consequence of the unequal rate of change in the age groups that comprise the population. The economic needs of the young and old differ significantly from those of the middle or directly productive groups. Education costs loom large for the young while medical outlays take on increased importance for the nation's senior citizens. In contrast the working age group, 18 to 64 years old, tend to spend relatively more of their income on new and improved housing, automobiles, television, and automatic washers and dryers. Then there is the matter of taste. Various age groups not only want entirely different goods but they want even "more of the same" goods such as food, clothing, shelter, automobiles in different sizes, models, colors, and locations. Thus in trying to understand the nation's resource needs for distinct age groups at a particular time we must constantly keep in mind that the population does not grow smoothly and continuously but in spurts and jumps. The large increase in births in the late 19th century, the "baby boom," will just now be reflecting itself in a rapid increase in the population 65 years and over. Similarily, the large influx of immigration during the early decade of the 20th century, before the "open door" was closed, particularly of young and productive workers will in the 1960's and 70's add greatly to the older age group with its above average service requirements of health care, low cost housing, and recreation. While consumers of all age groups continue to make choices among the millions of goods that are produced in different sizes, models, and locations, in an important sense today's trend toward broad categories of goods such as education and health care may have been largely determined by unequal birth and immigration rates extending back in the past century rather than by individual choices in today's markets.

Although the population of the United States has been characterized by unequal rates of growth, it has been more unequal for some regions and groups of our country than of others. The percentage of the population under 18 years of age, which was 36 percent for the nation as a whole in 1960, ranges from 29 percent in the District of Columbia to 43 percent in New Mexico.[1]

In five other states--Idaho, Louisiana, Mississippi, South Carolina, and Utah--over 40 percent of the states' population was under 18 years of age. Differences in the age composition of the population are even more extreme among the older age groups among the states. Alaska, with only 2 percent of the state's population 65 years old and over, had the smallest proportion of elderly people, whereas the largest proportion was found in Iowa with 12 percent.

Even greater differences in median age are to be observed when the population is viewed from the standpoint of race or even smaller political divisions than states. For example, the median age of Negroes in 1964 was 21.7 years, well below the 29.5 median age of whites. Almost 55 percent of all Negroes were beneath that age level compared with 45 percent of all whites. While the median age of whites was virtually unchanged from its 1950 level (30.7 years), the Negro median age in that year was 26.2 years. The Negro population, therefore, has become considerably younger.[2]

Although the age composition of the population has tended to be fairly consistent throughout the United States, the above discussion suggests there are notable and important exceptions which must be taken into consideration in anticipating and supplying the needs of the American people in the decades ahead.

There is little or nothing that Americans can do about the uneven population growth of the past except to understand its economic and social impact on the present and future. For better or worse, the large families of the late 19th century and the influx of young immigrants in the early decades of the 20th century account

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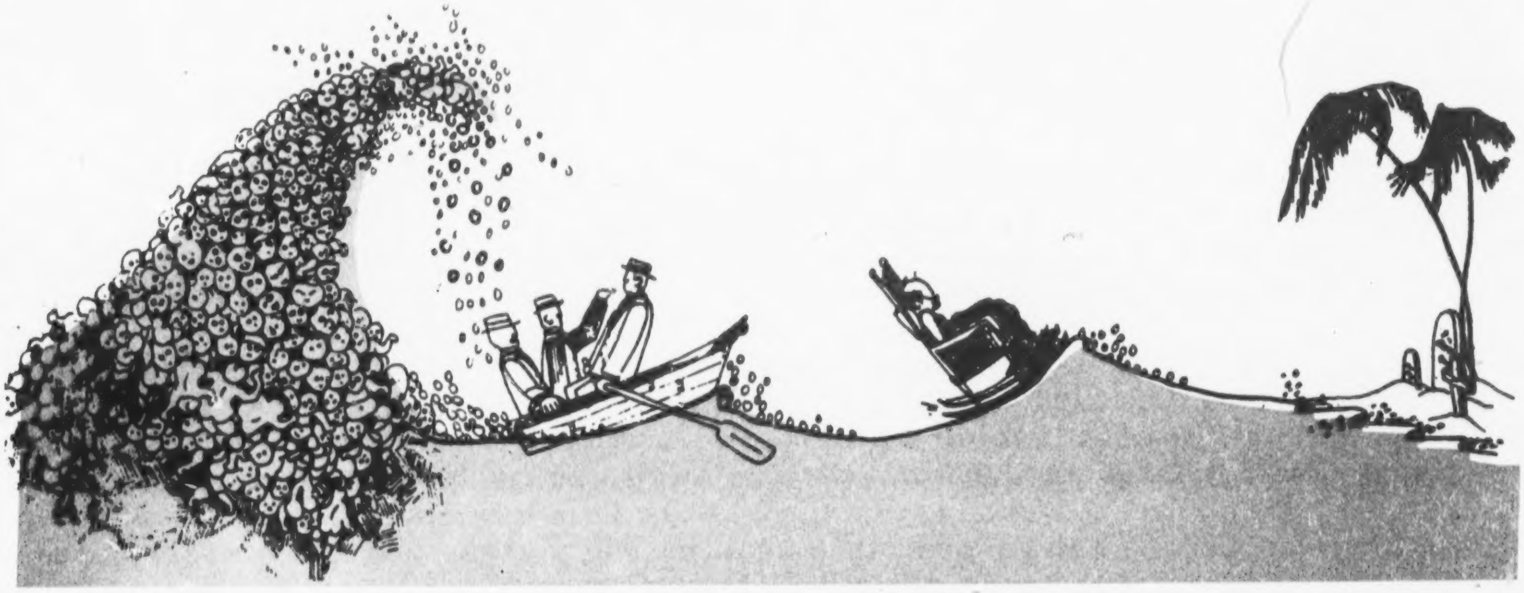
1. Supplementary Reports 1960 Census of Population
2. Supplementary Reports 1960 Census of Population and National Conference Board, Inc., February 15, 1966.

for the fact that the older age groups, 65 years and over, increased five times faster than the working age population during the intercensal period, 1950-60. A "baby boom" sooner or later becomes a wave of middle aged workers and ultimately senior citizens.



Because of the short time span, most people have no difficulty in relating a "baby boom" to the almost immediate need for new and greatly enlarged school facilities. The reports of school boards are filled with pleas for new educational facilities to meet the consequences of recent baby booms. Less apparent is that the same force which brought forth new schools and playgrounds over time will create a greatly increased demand for new and improved housing, automobiles, television and ultimately for health care facilities for the aged.

The economic cost of a "baby boom" does not end with the building of schools in the short run. It ends with the provision of grave sites some fifty to seventy years later.

All choices have a cost but in the case of population these costs often cannot be measured until the person or the group has run its full course.

THE POPULATION IS NOT THE LABOR FORCE

TABLE 1.12

(In Millions)

TOTAL POPULATION - (1950		152.3
Less: Those under 14 years of age	39.8	
Those in institutions	1.6	41.4
Noninstitutional population, 14 years and over		110.9
Less: Housewives	33.1	
In school	6.2	
Unable to work and others	6.9	46.2
TOTAL LABOR FORCE		64.7
Less: Armed Forces	1.6	1.6
CIVILIAN LABOR FORCE		63.1
Less: Unemployed Persons	3.4	3.4
EQUALS: Employed Persons		59.7

*Annual figures are averages of monthly figures

Source: STATISTICAL ABSTRACT OF THE UNITED STATES, 1964, U. S. Department of Commerce, Bureau of the Census.

8.

INCLUDED	EXCLUDED

Your teacher will explain the procedure used in gathering data to determine who is included in the labor force. Check your entries above and write additions in the space provided here and on the following page.

THE POPULATION IS NOT THE LABOR FORCE

WHO IS NOT INCLUDED IN THE LABOR FORCE?

WHO IS INCLUDED IN THE CIVILIAN LABOR FORCE?

WHO COMPRISES THE TOTAL LABOR FORCE?

9. Using the data given below for 1960, determine how many persons were in:

TOTAL LABOR FORCE (TLF)____________
CIVILIAN LABOR FORCE (CLF)____________
EMPLOYED____________
SHOW ALL YOUR COMPUTATION ON A PAGE TO BE ADDED TO YOUR MANUAL

DATA FOR 1960. (In Millions)

Unemployed persons	3.9
Armed Forces	2.5
Housewives	34.6
Children under 14 years of age	55.3
Total Population	180.7
Institutionalized persons	1.9
Others (unable to work)	9.5
Persons over 14 in school	8.2

Source: Statistical Abstract of the United States, 1964.

THE POPULATION IS NOT THE LABOR FORCE

10. COMPARE AND CONTRAST THE DATA ON POPULATION AND EMPLOYMENT STATISTICS FOR 1950 with those for 1960 immediately above. Formulate well worded statements about what caused the increase in the nation's labor force in each 1950, 1960 and 1965.

TABLE 1.13

REPORTED AND PROJECTED LABOR FORCE OF THE UNITED STATES

1890-1980

(Thousands of Persons 14 and 16 Years Old and Over)*

YEAR	LABOR FORCE	POPULATION	Labor Force as % of Population
1890	21,833	41,799	( )
1900	27,640	51,441	( )
1920	40,336	74,145	( )
1930	47,404	89,100	( )
1940	53,297	101,103	( )
1950	60,617	112,354	( )
1960	69,512	125,701	( )
1965	77,178	138,261	( )
1970	85,999	150,075	( )
1975	93,646	162,836	( )
1980	101,408	174,234	( )

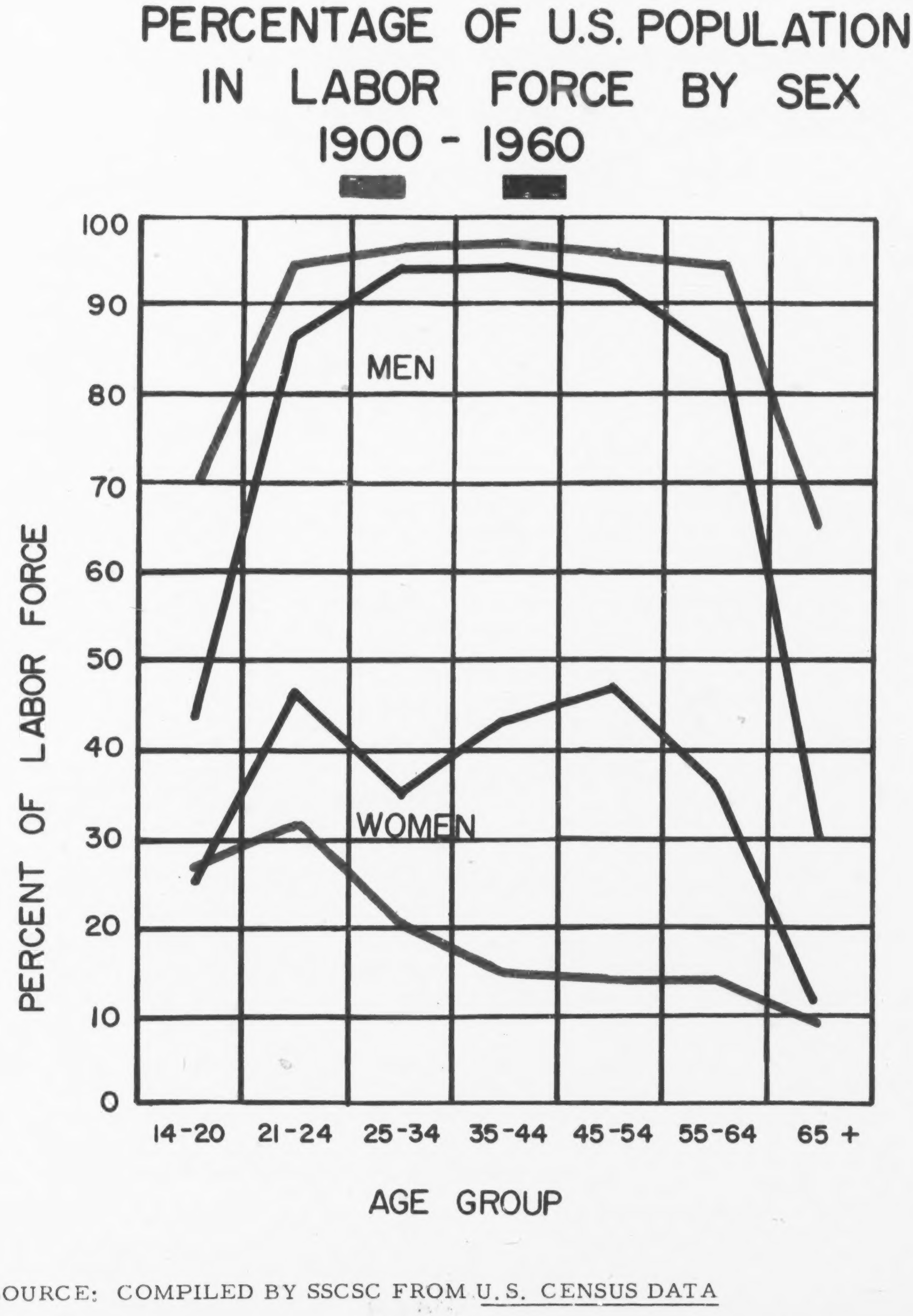
Source: The Economic Almanac. National Industrial Conference Board, 1967-68. Years 1970-1980 from Current Population Reports, P-25 Series, Nos. 381 and 388. Based on Series B Population Projections or Constant Rate of Fertility.

*NOTE: Effective in Jan. 1967, the lower limit for official statistics on the labor force was raised from 14 to 16 years of age.

11. Given the data on Table 1.13 above, compute the nation's labor force as a percentage of population for each of the years given on Table 1.13 and enter your percentages (carried to one decimal point) in the space provided on the table.

12. What do your answers tell you about the labor force in the period, 1890-1980, in relation to population? Write below.

FIGURE 1.17



PERCENTAGE OF U.S. POPULATION IN LABOR FORCE BY SEX 1900 - 1960

SOURCE: COMPILED BY SSCSC FROM U. S. CENSUS DATA

MEN AND WOMEN IN THE LABOR FORCE

13. Study the data on Figure 1.17, Percentage of U. S. Population in the Labor Force By Sex in the Years 1900-1960.

Figure 1.17 shows the pattern of participation of men and women in the labor force changed dramatically between 1900 and 1960, a period of over half a century. Both men and women tended to enter the labor force at a different age to participate at a different rate and to leave the labor force at a much earlier age.

13.1 Did men and women tend to enter the labor force at an earlier or late age in 1960 than in 1900?

13.2 Did the middle age group, 18-64 years, participate in the labor force at the same level in 1960 as it had earlier in 1900?

13.3 Did men and women tend to leave the labor force at an earlier or later age in 1960 than in 1900?

13.4 What are the principal similarities and differences in the pattern of participation of women in the labor force between 1900 and 1960? How do you account for these similarities and differences?

13.5 What are the principal similarities and differences in the pattern of participation of men in the labor force between 1900 and 1960? How do you account for these similarities and differences?

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13.6 Figure 1.17 indicates that there were important differences in the pattern of participation of men and women in the labor force, particularly with respect to age in both 1900 and 1960. How do you account for the differences? What role, if any, did culture play?

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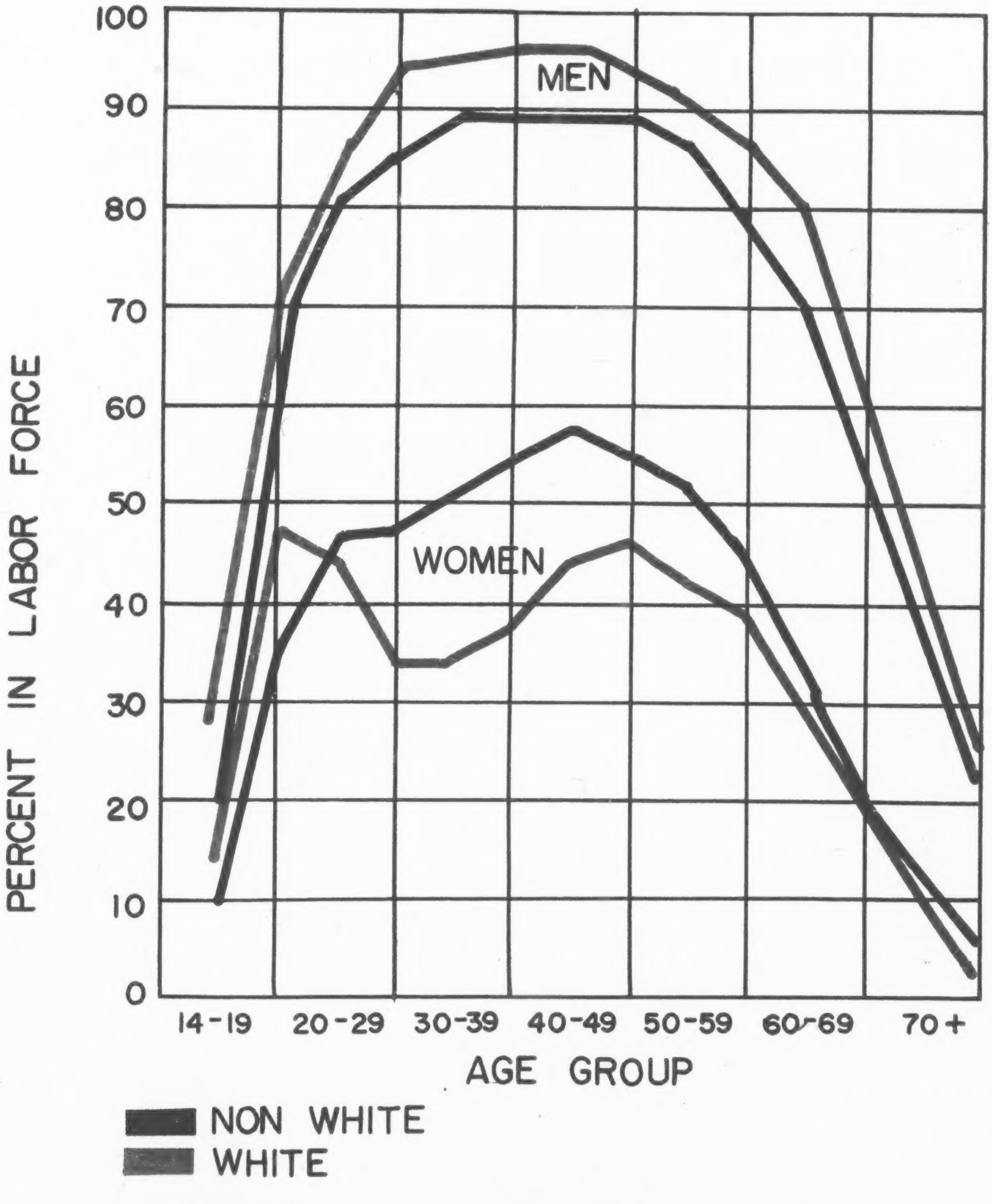
FIGURE 1.18

PERCENTAGE OF U.S. POPULATION IN LABOR FORCE BY AGE AND COLOR 1960



SOURCE: COMPILED BY SSCSC FROM U.S. CENSUS DATA

RACES IN THE LABOR FORCE

14. Having examined Figure 1.18 and compared it with Figure 1.17, the following questions concerning Figure 1.18 should be answered.

    14.1 What are the principal differences in the pattern of participation of white and non-white males in the labor force in 1960? How do you account for the differences?

    14.2 What are the differences in the pattern of participation of white and non-white women in the labor force in 1960? How do you account for these differences?

14. 2 (continued)

What is the relationship, if any, between the levels and pattern of participation of both white and non-white men and women in the labor force in 1960? How do you account for any difference?

MEN AND WOMEN IN THE LABOR FORCE[1]

The growth in the country's labor force over the past two decades--though not so rapid, in relative terms, as the increase in population--has nevertheless been very substantial. From 56 million in 1940, the number of workers grew to 73 million in 1960. This gain of 17 million workers was the largest ever yet experienced in this country in any 20-year period, though it will be far surpassed in the next 20 years.

A variety of developments have entered into the growth of the labor force. The greatly increased labor force participation of women, especially of those between 45 and 65 years of age, has been the most striking recent development in this field. Although they currently constitute only one-third of the country's workers, women have accounted for about three-fifths of the entire labor force increase over the 1947-62 period.

While women were drawn into employment in large numbers during World War II, their attachment to the labor force was thought to be temporary due to the war. Since 1947 the more lasting changes in their employment patterns have become evident.

Between 1947 and 1962 the number of women workers rose by 7.6 million, as compared to the 5.5 million rise in men workers. The number of women workers 45 and over more than doubled. During this period the proportion of all women in the labor force rose from 30 to 37 percent while the corresponding "labor force participation rates" for men declined from 84 to 79 percent.

The steady movement of women from the home to outside employment has been brought about partly by the movement of population to urban areas, where women can take advantage of the employment opportunities in clerical, sales, manufacturing, and service occupations. At the same time, care of the home has become a less time-consuming activity as a result of new laborsaving equipment, packaged foods, and the availability of kindred services of many kinds. In addition, the rising levels of education have helped to qualify more women for work outside the home, and they have also motivated many to work in order to use their training or pay for a better education for their children. Economic pressures and changes in traditional attitudes toward the employment of women, especially married women, have also contributed to the movement of women into paid jobs.

The extent of women's work, of course, continues to be related to their family responsibilities. For women, labor force participation reaches a peak in the late teens and early twenties, as they leave school, and then drops in the middle twenties as marriage and motherhood bring withdrawals from the work force. After they reach 35 or thereabouts and their children reach school age, the proportion employed outside the home rises. It reaches a new peak at ages 45 to 54 and then tends to drop off, since many women stop working at a younger age than is customary for men.

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[1] Manpower Report of the President, and a Report on Manpower Requirements, Resources, Utilization, and Training (Washington: U. S. Govt. Printing Office), 1963.

MEN AND WOMEN IN THE LABOR FORCE

The recent rise in women's employment has occurred almost entirely among married women. From 1947 to 1962 the number of married women in the labor force rose from 7.5 to 14.8 million, accounting for 56 percent of the total labor force growth. There was relatively little change in the number of unmarried women workers (single, divorced, and widowed) during this period.

Less dramatic than the increase in women workers but significant also are the changes in the labor force activity of men. Though the total number of men workers has continued to rise because of population growth, the rate of labor force participation has declined both among boys and among men past 60.

The proportion of workers among boys 14 to 19 years of age dropped from 54 to 44 percent between 1947 and 1962. One factor underlying this decrease has been the movement of population to cities, where work opportunities for youth are limited in comparison with the extensive unpaid family labor, in which they are engaged on farms. Important, also, has been the extension of education brought about in part by rising educational requirements for employment.

The labor force participation rate of young men aged 20 to 24 also declined slightly during the latter part of the period though it rose in the early postwar years. In the next older age groups, 25 to 54 years, nearly all men continue to work or look for work, as they have traditionally done. Among men 55 to 64 the proportion of workers has always been somewhat smaller than among the younger age groups, reflecting a greater incidence of disabling illness and some retirements, but the proportion showed no tendency to change in this age group until fairly recently and it is still constant for men under 60. For those aged 60 to 64, however, the labor force participation rate has been edging downward. During the past year this trend may have been influenced by the Social Security Act amendment permitting men to retire at age 62 with reduced benefits.

The decline in labor force activity has been much more marked in the case of men past 65. In this age group the labor force participation rate fell from 48 percent in 1947 to 30 percent in 1962. A factor in this decrease--as in the declining labor force participation of youth and the contrary trend for women--has been the movement of people from farms, where older men tend to work as long as they can, to cities, where their employment opportunities are likely to be more limited. The earlier retirements made possible by the social security laws and the expansion of private pension plans have also had a marked effect on the proportion of workers among men past 65--much more so than in the 10- to 64-year-old group. The increased employment of women in their 40's and 50's--which adds to family savings and increases family retirement income through the separate retirement benefits for which the wives qualify on the basis of their own employment--may also have helped speed their husband's retirement.

15. Now you should be ready to prepare a set of generalizations about the composition of the nation's labor force. In making your preparation reexamine Tables 1.12 and 1.13, Figures 1.17 and 1.18, and the reading "Men and Women in the Labor Force" on pp. 150-151.

In a series of well worded statements, write your generalizations under the appropriate headings that follow. Should you need additional space, use your own paper and insert in the manual.

MY GENERALIZATIONS ABOUT THE COMPOSITION OF THE AMERICAN (U.S.A.) LABOR FORCE--

SIZE/TRENDS: ______________________________

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AGE: ______________________________

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SEX COMPOSITION: ______________________________

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MEN, WOMEN AND RACES IN THE LABOR FORCE

RACE: ____

EDUCATION: KEY TO LATE ENTRY AND EARLY EXIT FROM THE LABOR FORCE

EDUCATIONAL TRENDS AND THE LABOR FORCE[1]

The U. S. Department of Labor reports that a substantial rise in the educational attainment of American workers has been achieved in recent decades, as younger people with a higher average level of education than their fathers--and even than their older brothers--move into the labor force and older workers leave it.

The relative numbers of workers who are college graduates have risen especially fast in the past 10 years--from 7.9 percent in 1952 to 11 percent in 1962, for those 18 years old and over. The increase in the proportion that have had at least a high school education is also noteworthy; this proportion rose from 42.8 to 53.8 percent over the past decade, a gain of more than 25 percent. At the lower end of the educational ladder, the proportion of workers with less than 5 years of school fell from 7.3 from 4.6 percent. But this 4.6 percent of the labor force represents 3.1 million men and women workers, all of whom had less than the minimum schooling needed for "functional literacy" in the present-day economic and technological world.

An interesting development in the past decade is that men have been rapidly overtaking women workers in years of school completed. In 1952 the median years of school completed was 10.4 for men workers and 12.0 for women--a difference of 1.6 years. By 1962 this difference had practically disappeared, with the median for men at 12.0 years and that for women at 12.2 years. The most striking educational gain recorded for men, as compared to women workers, was in the proportion completing 4 or more years of college.

The differences between white and nonwhite workers in educational attainment have also been reduced in recent years. In the past decade, the proportion of nonwhite workers with at least a high school education nearly doubled, rising from 17 to 32 percent. The corresponding increase for white workers was much less rapid--from 46 to 57 percent. At the same time, the proportion of nonwhite workers who had completed 8 years of school or less fell from 64 to 45 percent.

These trends are expected to continue over the next 10 years. Nevertheless, the number of young people out of school and in the labor force is likely to mount because the total number of young men and women in this age group will be so much larger than it was in the prior decade. Altogether, there may be about 4 million 16- to 19-year-olds out of school and working or seeking work in 1975, compared with 3.2 million in 1964.

Though the proportion of young people graduating from high school will probably continue to rise substantially, the increase in the youth population will increase the total number of school dropouts. An estimate by the Bureau of the Census indicates that in 1975 the number of people aged 25 to 29 who have not completed high school will reach 4.8 million, as compared with only 3.3 million in 1965.

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[1] Adapted from Manpower Report of the President, and a Report on Manpower Requirements, Resources, Utilization, and Training (Washington: U. S. Govt. Printing Office, 1963, 1965, 1966).

EDUCATION: KEY TO LATE ENTRY AND EARLY EXIT FROM THE LABOR FORCE

Educational Trends and the Labor Force

Close to a third of all young people drop out of school before graduating from high school, despite the slow steady progress made in recent years in reducing the drop out rate. This means that the number of young people leaving school before high school graduation is now averaging around a million a year. Yet the unemployment rate for young workers who failed to finish high school is about two-thirds higher than for those with high school diplomas. Furthermore young drop outs who do not find jobs are likely to be employed in occupations with the lowest wage rates. Among the boys who dropped out in 1963 and found jobs by October of that year, nearly half (45%) were employed as laborers or as service workers mainly in low level jobs compared with only about one-fourth of the boys who had completed high school.

. . . Nonwhite workers have a heavy educational handicap. About two-fifths of them had no more than an eighth grade education in 1964, almost twice the corresponding proportion for white workers.

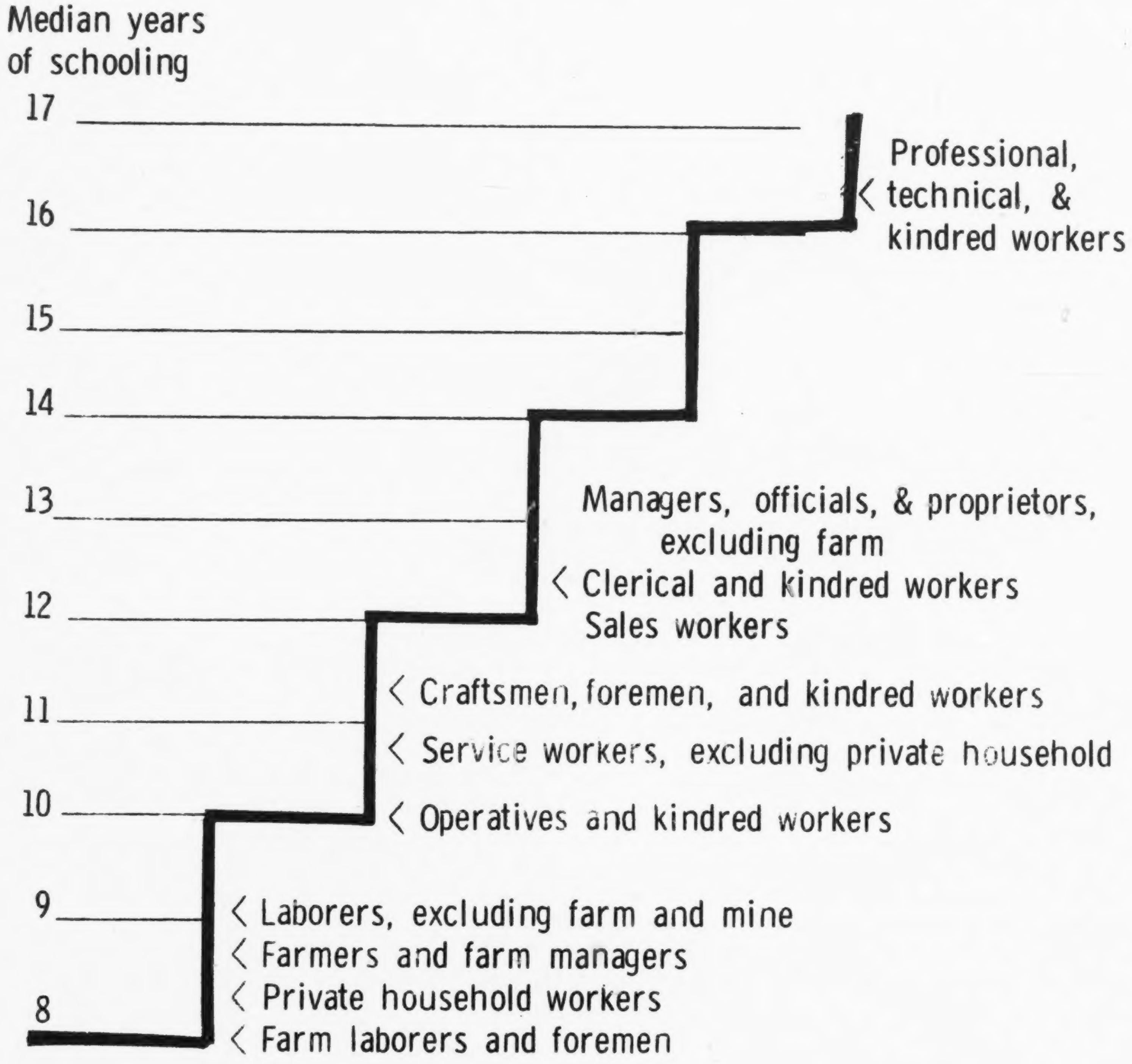
More than 100, 000 able high school graduates, who could benefit greatly from higher education, failed to go to college last fall. Some lacked motivation to continue their education (including some girls who left school to marry), but many others were prevented from going to college by financial factors. In addition, approximately 40 percent of all students who enter college leave before graduation. On this basis, the number withdrawing last year probably was as high as 400, 000. Although the majority of these withdrawals were due to academic and motivational factors, a large number of successful students were forced to leave college for financial reasons.

. . . Because of the demands of modern technology, education is becoming as never before, an essential intermediary between man and his work. In addition, the rapid shifts in the nature of jobs and the occupational patterns of employment brought about by technological progress call for training programs closely linked with and responsive to current and prospective occupational changes. They also mean that workers at many levels of skill--including the most highly trained professional personnel--need flexibility in adjusting to occupational change and continuing opportunities for education and training through their working life.

In view of the mounting number of young workers and the rise in average levels of education, uneducated youth will be competing for jobs in future years with more and better educated young men and women. The handicap imposed by a poor education today is but a pale indication of what it will be in the future.

FIGURE 1.19

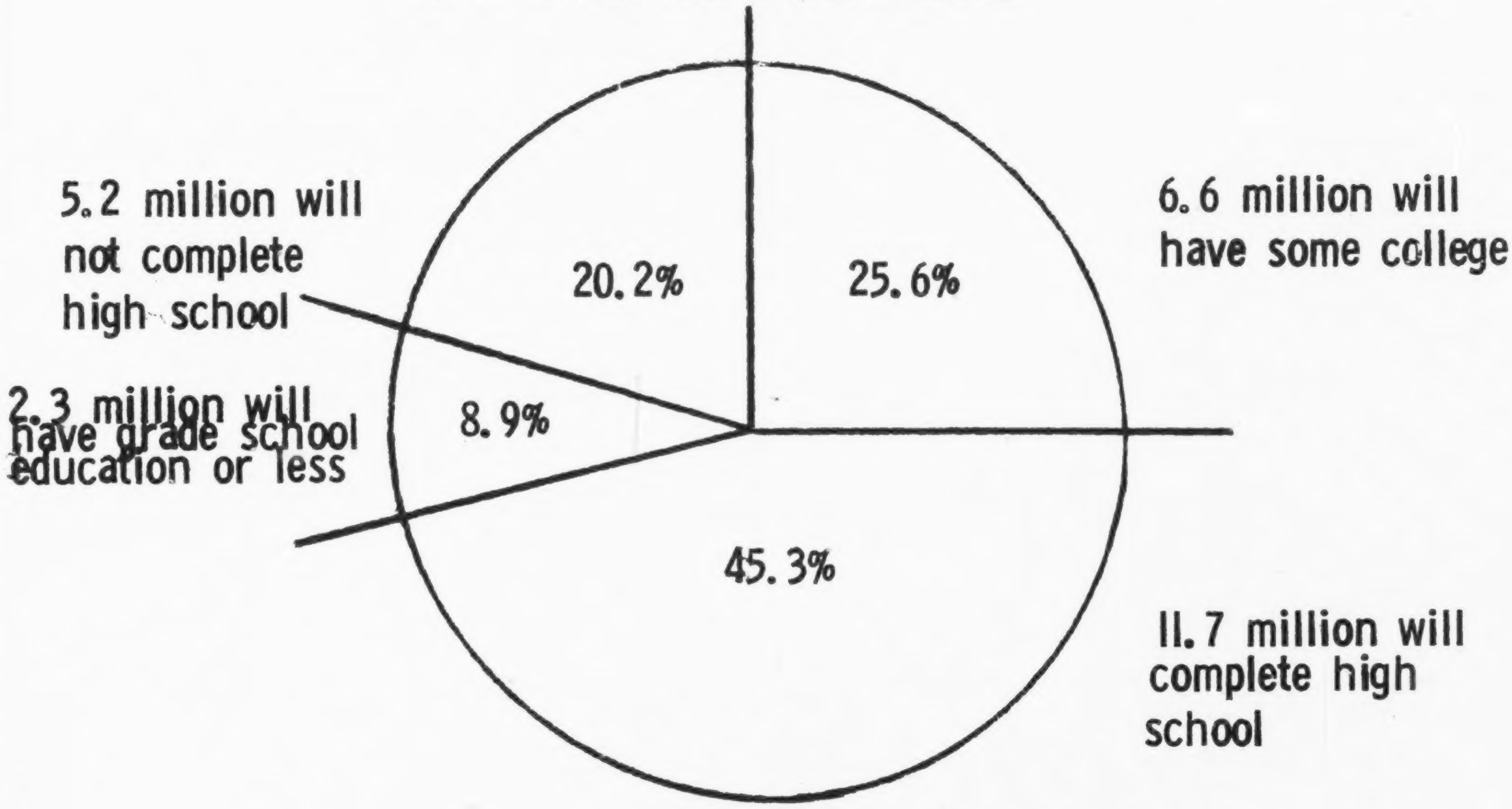
MEDIAN YEARS OF SCHOOL COMPLETED BY MAJOR OCCUPATIONAL GROUP, MARCH 1962



Source: U. S. Department of Labor, Bureau of Labor Statistics.

FIGURE 1.20

BETWEEN 1960 AND 1970 26 MILLION YOUTH WILL ENTER THE LABOR FORCE



SCHOOL GRADES OF YOUTHS LEAVING BEFORE HIGH SCHOOL GRADUATION

EDUCATION: KEY TO LATE ENTRY AND EARLY EXIT FROM THE LABOR FORCE

16. Read "Educational Trends and the Labor Force" and prepare the following for class discussion.

Why is there increasing national concern about:

16.1 High School dropouts: ____________________

16.2 Academically able high school graduates who do not enter college: ____________________

16.3 Support this statement with evidence from the reading "Educational Trends and the Labor Force" p. 154 and Figure 1.19 and Figure 1.20.

Education is the key to late entry, high participation, and early exit in the labor force.

FIGURE 1.21

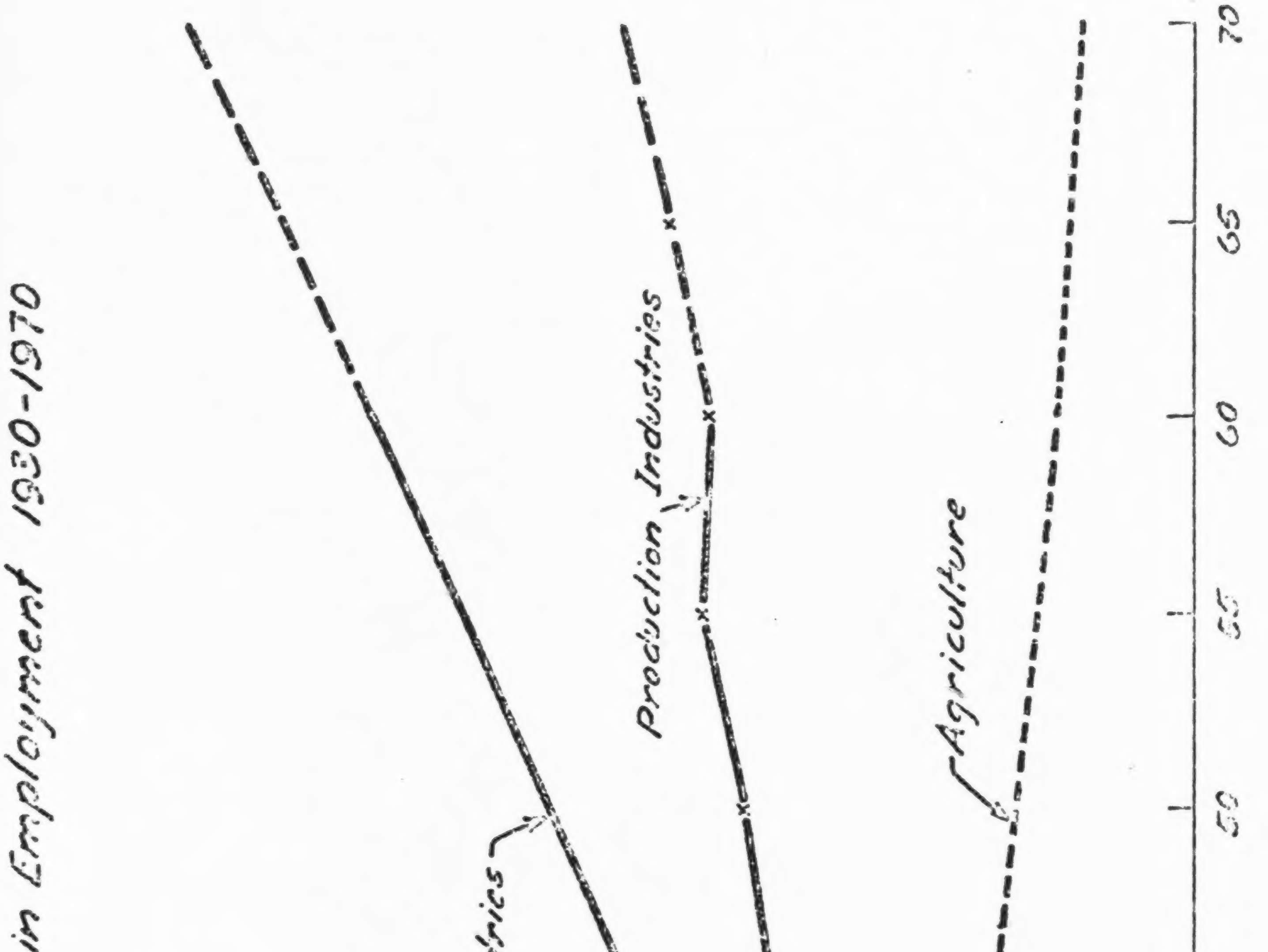


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TABLE 1.14

OCCUPATIONAL DISTRIBUTION OF THE LABOR FORCE
1920, 1940, 1960, 1964, 1975

	1920	1940	1960	1964	1975
Professional & Technical Workers	5.4	7.5	11.2	12.2	14.9
Managers, Officials & Proprietors	6.6	7.3	10.6	10.6	10.4
Clerical Workers	8.0	9.6	14.7	15.2	16.5
Sales Workers	4.9	6.7	6.6	6.3	6.5
Craftsmen, Foremen & Kindred	13.0	12.0	12.8	12.8	12.8
Operatives & Kindred	15.6	18.4	18.0	18.4	16.7
Laborers Excluding Farm & Mine	11.6	9.4	5.5	5.2	4.2
Service	7.8	11.7	12.5	13.2	14.1
Farmers & Farm Managers	15.3	10.4	4.2	6.3	3.9
Farm Laborers & Foremen	11.7	7.0	3.9		

17. The data on Table 1.14 tells us a great deal about the kind of work Americans demanded of the labor force over a period of forty-four years.

17.1 What kind of work did we Americans expect and get from our labor force in 1960?

17.2 Which of the occupational groups in Table 1.14 had the largest percentage increase in the forty-four year period, 1920-1964?

17.3 Which of the occupational groups in Table 1.14 had the largest percentage decline in the forty-four year period, 1920-1964?

17.4 How do the data on Table 1.14 and Figure 1.21 help to explain the occupational changes you identify in 17.2 and 17.3?

17.5 How have these occupational changes affected the members of the labor force, particularly with respect to the length of time and conditions under which they worked? Before answering this question read "Projections of Occupational Requirements" which supplements Table 1.14, 162-163.

17.6 Have there been any other results of the occupational changes, 1920-1964, for our economy?

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PROJECTIONS OF OCCUPATIONAL REQUIREMENTS[1]

The Department of Labor's new projections confirm previous indications that professional, technical, and kindred workers, who have been by far the fastest growing occupational group since World War II, will hold this preeminent position over the next decade. However, the rate of employment growth in this broad occupational group is expected to be somewhat slower than in the recent past.

By 1975, employment of professional and technical workers may increase by well over two-fifths. Personnel needs are expected to rise substantially in practically every professional field. The growth in scientific and technical employment, which has been a feature of postwar occupational trends, will continue to be rapid, although in this occupational group as in the professions generally, some slowing of the pace of increase is anticipated--owing in part to the leveling off in defense expenditures. However, increasing demands are anticipated for personnel with basic engineering or scientific training to work in such fields as teaching, administration, and management. In addition, a new emphasis on the social sciences and related professions is (anticipated) by the programs already initiated or recommended by the President as part of the national effort toward the Great Society. And an increasingly sharp demand for personnel in the health professions and in many areas of teaching is also anticipated.

Employment expansion for managers, officials, and proprietors is expected to proceed at about the average rate for all occupations and thus be much slower than for professional and technical workers--though the anticipated gains would be more rapid than those achieved by the manager-proprietor group in recent years. The demand for salaried managers and other officials in business organizations and government is likely to continue increasing fairly rapidly. Although the number of proprietors declined considerably during the postwar period, this trend is expected to level off in coming years and the number of proprietors may remain roughly at 1964 levels. Altogether, an increase in employment of slightly more than one-fourth is projected for the manager-proprietor group over the 1964-75 period.

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[1] Manpower Report of the President and A Report of Manpower Requirements, Resources, Utilization, and Training. United States Department of Labor, March 1965.

Clerical and sales workers--the largest group of white collar workers--are also expected to have a rate of employment increase close to or greater than that projected for the work force generally. In both of these fields, technological developments (in case of clerical workers, electronic computers and other new office equipment; in the case of sales workers, chiefly service and allied techniques) will probably have a considerable effect in restricting the growth of manpower requirements.

The number of clerical workers needed should grow about one-third between 1964-75, a rate of increase greater than that for employment as a whole, but roughly the same rate as during post World War II period. Sales workers, on the other hand, will increase much more slowly than any other white-collar occupational group. Nevertheless, by 1975, the number of sales workers needed may be nearly one-fourth higher than in 1964--which would be a more rapid rise than has taken place in sales employment in recent years.

For service workers as a group, employment gains are likely to accelerate over the next decade. This growth may be facilitated by the new Federal programs to train workers in these occupations. The employment increase projected for this broad group (which includes such diverse occupations as private household worker, policeman, hospital attendant, and beautician) is about two-fifths--approaching that projected for professional and technical workers.

In manual nonfarm occupations, recent strong increases in employment have raised the hope that we may be seeing a reversal of one of the dominant postwar occupational trends, namely, the declining proportion of employment in blue-collar jobs, particularly at the semi-skilled and unskilled level. A careful examination of the employment trends in different industries suggests, however, that this is probably not the case.

Operatives and kindred workers who are not only the largest blue-collar group but the largest occupational group in the labor force--will have a below average increase in employment between 1964-75. . . And employment of unskilled workers is not expected to show any significant change over the 11 year period. Employment opportunities in both these occupational groups will be greatly affected by automation and other new technological developments.

On the other hand, some acceleration in demand for skilled workers is anticipated, as a result of growing needs for mechanics and repairmen, building trades craftsmen, and foremen. The overall growth in this group between 1964 and 1975 is projected at one-fourth, roughly the same rate as that projected for employment generally.

In view of the continued declines in agricultural employment, decreasing requirements for farmers and farm workers are of course indicated. By 1975, employment in this broad occupational group may be nearly one-fourth below the 1964 employment figure.

17.7 Having read "Projections of Occupational Requirements" select out those occupations that are projected as being the fastest growing in 1975. Opposite each occupation enter the approximate years of beyond high school required as preparation for employment. See Figure 1.19 for approximate years.

OCCUPATION	EDUCATION

17.8 What do your entries tell you about the kind of work Americans will expect of their labor force in 1975?

17.9 What are the implications of these occupational projections for you and your age group?

17.10 SUMMARY

WHAT ARE THE PRINCIPAL CHARACTERISTICS OF AMERICA'S HUMAN RESOURCES? DEVELOP YOUR ANSWER IN A WELL WORDED ESSAY NOT TO EXCEED 150-200 WORDS.

18. Here we return to Figure 1.16, page 116, which graphically relates the nation's human resources classified as population, labor force, and households to some of the natural resources and final products and total national output or Gross National Product.

18.1 Study the data on Figure 1.16 and think about the inter relationship of the nation's human resources, the natural resources, final products, and total national output. What demands will be made on our natural resources and labor force to satisfy these new and enlarged choices?

18.2 Human resources are grouped as population, labor force, and households to facilitate our understanding of the economy. As the labor force undergoes change, what effect, if any, will this have on households?

18.3 If income continues to increase faster than population, what effect might this have on the economic choice people make? For example, how will the demand for food and clothing compare with the demand for automobiles, education, and recreation as well as other goods and services purchased by the nation's households?

SECTION IV

CAPITAL RESOURCES IN THE ECONOMY

WHAT IS CAPITAL EQUIPMENT? 167

MONEY IS NOT CAPITAL 168

CAPITAL ACCUMULATION: A NEVER ENDING JOB 179

- Capital Equipment in the Steel Industry 181
- A Company Generates Its Capital Funds 183
- Where the Fishing Village Gets Its Capital 184
- Automation: Threat and Promise 191
- Who's Afraid of Automation 193

THE PARTS ARE NOT THE WHOLE: THE BUILDING OF AN ECONOMIC SYSTEM 195

Figure 1.22 Capital Invested Per Production Worker in Manufacturing 174

Figure 1.23 Assets Per Farm Worker. . . Production Assets Used in Agriculture 1940-1964 175

Figure 1.24 Growth in Output Per Worker 176

Figure 1.25 The Average Work Week 177

Figure 1.26 Pay For One Factory Hour of Work Buys 178

Table 1.15 Structures and Durable Equipment 180

BASIC UNDERSTANDING: CAPITAL EQUIPMENT IS LIMITED AND CAN BE USED IN DIFFERENT WAYS.

CONCEPTS: Capital equipment, productivity, change, limited substitution capital formation, constraint

SKILLS: Formulating and testing hypotheses
Interpreting and analyzing data

ATTITUDES: Understanding and appreciating the benefits and costs of capital resources in the achievement of human wants

GENERALIZATIONS:

1. Capital equipment is derived from natural and human resources
2. Capital equipment includes those products of labor and natural resources used in the production of goods and services
3. The quantity and quality of capital equipment influences the productivity of labor
4. Capital equipment requires the postponment of consumption in the present to increase output in the future unless there are idle resources such as during a depression.
5. Capital is not a perfect substitute for the other factors of production

In making preparation for working with the concepts and understandings about capital equipment as a productive resource reread pages T-2-3 in the Teacher's Manual Section on The Economy's Productive Resources--(Capital Equipment).

Examples of capital equipment are provided in the listing on page 165 167
of the Student Manual. To develop a working definition of the meaning of capital equipment, the student is asked to study the items in the list and identify common elements. We are looking for these kinds of statements:

- All of these things are man-made.

- All of these things are man-made and result from "mixing" ideas and labor with natural resources.

- All of these things are used to produce economic goods and services and not for consumption themselves. They are goods to make other goods. For example, scientists using the research facilities at a state agriculture college shown in the film, Durum, Standard of Quality, develop a new variety of wheat used in the making of macaroni and bread flour.

- Or, the steel mills, barges, research laboratories, and assembly line shown in The Rouge are used to manufacture automobiles.

BASIC UNDERSTANDING: CAPITAL EQUIPMENT IS LIMITED AND CAN BE USED IN DIFFERENT WAYS.

– Or, elementary schools, high schools, colleges and vocational technical schools produce educational services and contribute importantly to upgrading the skills of our human resources who in turn design and produce more and better machines, and tools.

– All of these things wear out and in time have to be replaced.

167 Slides Nos. 800-807 annotated here illustrate recent additions to the nation's stock of capital equipment in the steel and petroleum industries. These can be projected after students have made their entries on question No. 1 (page 167) at which time information about each slide is shared and discussed with the class.

800 - Feeding a new steel furnace. Molten iron is being pured into one of the three furnaces in the New Basic Oxygen Process shop of the U. S. Steel which began initial operations in the Chicago area in 1965. (Courtesy U. S. Steel)

801 - Construction in the Chicago area of the huge 84 inch hot strip mill for production of the largest weld free coils available anywhere.(U. S. Steel)

802 - Here is the heartbeat of American industry--a large steel plant. It is at Gary, Indiana, on Lake Michigan. The long boat is an ore vessel. It has just brought a load of iron ore from Minnesota down the Great Lakes. The five large machines behind the ore vessel look something like giant grasshoppers or praying mantes. They are unloading the iron ore. They dip down into the boat and with a large "clam" bucket for a mouth they take a big bite of ore. They lift their "heads" and back up a short distance and drop the ore into a pile. The machines keep bobbing up and down until they unload the ore vessel.

The iron ore is to be made into iron in the blast furnaces. You can see the tops of six blast furnaces in a row at the back of the picture.

Behind the blast furnaces, the steel mill stretches far out in other buildings. There the iron which has been made in the blast furnaces is changed into steel and the steel is shaped into various products.

At the very front of the picture are railroad tracks. Railroads are important to steel mills. They bring coal and other supplies and take away the steel products to manufacturers. There are also many miles of railroads inside of a steel mill to transport iron and steel between various buildings.

This plant is the Gary Steel Works of United States Steel Corporation. It is one of the largest steel plants in America and can produce more than seven million tons of steel a year. This is nearly one third as much steel as all the steel mills in either the United Kingdom or West Germany can make annually. (U.S. Steel)

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803 - Nighttime on Nevill Island. Maleic anyhydride plant of USS chemicals, a division of U. S. Steel. Product is a raw material for chemicals, paints and plastics. (U. S. Steel)

804 - Oleum refinery near San Francisco, supplies northern California and the Pacific northwest (Courtesy Union Oil Co. of California).

805 - The world's first Unicracker is in Union Oil Company largest refinery at Los Angeles. It produces 124 barrels of gasoline from each 100 barrels of feed stock. (Union Oil Co.)

806 - Torrey Canyon, one of Union Oil's recently enlarged supertankers, unloading 870,000 barrels of Middle East crude oil at Los Angeles Harbor. (Union Oil Co.)

804 - Union Oil Center, Los Angeles. (Union Oil Co.)

2. Here students revise their initial statements and make additions giving supporting evidence from the slides, films, filmstrips, and readings used previously in the unit. Encourage students to cite examples in the local community. 167

3. Because of the operation of economic laws, there are limited possibilities for substituting labor and land without experiencing sharply rising costs. Therefore the question of whether a country has too much or too little capital cannot be answered without considering the availability of land and labor with which capital is combined. 167

4. The identification of common elements among the items listed in No. 1 provides a basis for labeling these things as CAPITAL EQUIPMENT, and writing an explanation of what this means. 168

Try to time your period so, if possible, students write their explanation for No. 4 in class.

Their statements should help you to determine whether or not they need additional clarification.

NOTE: Do their statements indicate that they are beginning to understand that those man-made aids used to produce goods and services and to get those goods and services to the consumer (used here to include households, other businesses, local, state and federal governments) are, in fact, capital equipment?

Have students look for illustrations and pictures of capital equipment in current newspapers and magazines. Have the class classify them by industry, i.e., manufacturing, mining, agriculture, banking and finance, transportation, communication, retail sales, etc.

A second basis for classification is to classify on basis of control/ownership, that is, capital equipment owned by individuals (private

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sector of the economy) and capital equipment in the public sector (local, state, federal governments).

Private Sector	Public Sector
factory buildings	fire trucks
tools and machines in the factories	public elementary and secondary schools
tractors, combines, plows	state universities
oil drilling rigs	state colleges
oil refineries	state and federal capital buildings
banks	post office
private schools and colleges	

Student committees might arrange bulletin board displays to illustrate these classifications.

168 5. Here we raise the question of why we and the people of the other nations want capital equipment?

Students have suggested these:

If capital equipment, Then--

- man can produce more goods and services for each hour he works
- man can enjoy more leisure
- man can produce more when at work and have time left over to do other things
- man can produce more with less drudgery
- man can create more and different jobs
- man can increase his output of more goods and services in the future
- man can increase or raise his standard of living
- man can create new and different uses for natural and human resources and for capital equipment

Another important consideration is the enlargement of economic choices which transcend leisure.

Space is provided for students to write their hypotheses. It is assumed that when this is checked out in class discussion, students will write their revisions and additional hypotheses in the space provided on page 168.

More revisions and additional hypotheses may follow No. 5 after their selected pieces of data are analyzed and used to check the hypotheses suggested in answer to No. 4.

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6. Five pieces of data are introduced here, Figures 1.22, 1.23, 1.24, 1.25 and 1.26, to provide selected data against which students are to check their hypotheses in No. 5, and to add additional ones. 174-178

In using economic data of this kind, it is important that students learn to read, interpret and formulate valid conclusions from the data. Some will leap beyond the data. Others may use only parts of the data provided. Your awareness of student problems in using economic data followed by appropriate questions and explanation can help students develop basic skills. Note if students read the title of a set of data or do they ignore the title and literally "grab" at isolated pieces of unrelated data?

Do they "get their bearings" by determining what the vertical and horizontal axis represent? Do they look for the period of time covered in the data?

Reading and accurately interpreting these kind of data provide opportunity to develop and improve skills in analyzing economic data.

ANALYZING DATA

6.1 Figure No. 1.22 CAPITAL INVESTED PER PRODUCTION WORKER IN MANUFACTURING 174

1. Range: $152,600 in Petroleum to $5,900 per production worker in the apparel industry. 169
2. Average per production worker in all manufacturing--$23,100.

An increase in the stock of capital makes it possible to increase output per man hour without increasing the work load. Economists call this productivity. For capital to bring about greater productivity, there must be an increase in the amount of capital per worker or an improvement in the quality of capital.

For workers this means higher wages, a shorter day, improved working conditions, and ultimately a rising level of living. The worker has benefit of an enlargement of choices for more and different products produced by the economy.

Larger income for households means a greater demand for "more of the same" or existing goods and services and in addition new and different products that households are now able to buy with higher incomes. More household spending units tend to move into the discretionary spending group.

For the economy this means both a quantitative and qualitative change in the nation's stock of capital equipment, rising income, rising expenditure for consumer goods and services and a larger Gross National Product as well as an increase in the GNP per worker.

6.2 Figure 1.23--Assets Per Farm Worker 175

According to these data, assets per farm worker increased from $3,314 per farm worker in 1940 to $27,005 in 1964 or an eight fold increase. 170

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170 Assets in capital equipment increased from $38 billion in 1940 to $176 billion in 1964 or about a 4 2/3 fold increase.

The rapid rise in capital assets per farm worker is in large measure the result of people leaving agriculture and thereby equipping better those who remained.

The consequences of this impressive increase in capital equipment per farm worker is evident in: a quantitative and qualitative change in the nation's stock of capital equipment in agriculture, enormous increases in productivity with the use of hybrid seed, chemical fertilizer, and mechanization. The output per man hour has doubled since 1950. Also, 159 the movement of workers out of agriculture (See Figure 1.21--Employment Trends)--20 percent of the nation's labor force in 1940 was employed in agriculture, an estimated 7 to 8 percent in 1960 and moving toward 5 percent presently.

171 6.3 Capital like education is a key factor in explaining that labor is able to enter the labor force later, produce more, and leave earlier without any loss in production.

- Capital shortens the work week as well as the number of years that workers are employed.
- An increase in capital makes it possible to increase output per man hour without increasing the work load.
- To achieve rising productivity there usually must be an increase in capital per worker or new improved capital.

176 6.4 Figure 1.24--Growth in Output Per Worker

171 Figure 1.24 shows that in the eighty years, 1880-1960, there was a five fold increase in productivity, that is, each worker in 1960 turned out each hour he was at work five times the goods and services a worker produced in 1880.

Figure 1.24 also shows that it is estimated each worker in the Year 2000 will produce approximately two and one-quarter times the goods and services a worker produced in 1960.

This increase in output per worker will be due to a number of factors including rising capital investment in new and improved capital equipment--tools, machines, structures; a more highly skilled labor force willing and able to use the new capital; increased specialization; businessmen with the knowledge and willingness to organize productive resources efficiently for production; effective and expanding demand; and a favorable political and social climate.

For the economy this level of output will mean rising productivity at the same time there is an impressive growth in the nation's population; a larger Gross National Product and GNP per worker; a shorter work week, later entry of workers into the labor force and earlier exit without loss in production. Qualitative changes in workers will be reflected in the kinds of goods and services they as members of households will want as a result of greatly enlarged incomes.

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6.5 Figure 1.25--The Average Work Week 177

Reduction in the length of the work week from 70 hours in 1850 to 60 hours in 1900; 50 hours in 1920; 40 hours in 1950; to 38 in 1960. 171

In spite of impressive growth in the nation's population in this period, the economy not only increased the output of goods and services to feed, clothe and house more and more people, but this was done with substantial reductions in the work week.

Factors that account for this include: an increase in the nation's stock of improved capital per worker with resulting increased productivity. 172

6.6 Figure 1.26--Pay for One Factory Hour of Work Buys 178

Again, an increase in the capital available to workers with rising productivity, 172

Expanding markets,

Rising level of living for more people.

NOTE: Per worker GNP is not the same as per person GNP. This should reenforce the fact that the labor force is not the population--an understanding developed in the preceding section on human resources.

7. You might suggest that some students develop a visual aid--using this as a means of presenting what they now perceive to be the benefits of a large stock of capital equipment with reasons why the American people value a large and improving stock of capital equipment. 173

FILM RECOMMENDED

PRODUCTIVITY: KEY TO PLENTY

22 min. B&W $4.55. Audio Visual Service, University of Illinois, Champaign, Illinois, or University of Indiana, Bloomington, Indiana.

The film may be used prior to or immediately following the summary statement (No. 7). If the film is used, the following questions should be used for analysis of the additional data presented in the film:

Inferencing
Evidencing
Generalizing

The film presents the following data on sources of energy and output per manhour in fifty year intervals. Prior to student viewing of the film, have students study these data and interpret what they mean. Also, what inferences can they make about life in our country in this period of time? Then, use the film to check out the accuracy of their inferences and interpretation of the data.

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	1850	1900	1950
Animal Power	50%	30%+	2%
Muscle Power	20%	15%	2%
Machine Power	30%	50%+	94%

After checking the initial interpretation of the data, and the accuracy of inferences, have students reexamine their summary statement in No. 7 and write a second version incorporating the new insights and understandings developed from the analysis made of the data presented in the film, Productivity: Key to Plenty.

NOTE

Rising Productivity

Although more and better capital equipment has been a very important factor in rising productivity, students should begin to identify in their analysis of the data and in the use of capital equipment, i. e., greater specialization and division of labor, research, improved education and health of workers, willingness of workers to learn to use the new tools, machines, and processes, improved means of transportation, individuals willing to assume the risk of investing savings, talent, and time to produce the new capital equipment, and/or to organize productive resources to produce a new good.

OPTIONAL BUT RECOMMENDED FOR STUDENT READING

Roger Burlingame's Machines That Built America (New York: New *American Library of World Literature--A Signet Key Paperback, 501 Madison Avenue, 1955) provides excellent materials on inventors whose inventions contributed so importantly to America's growth as an industrial nation. As a minimum all students should read Chapter 4, "Machines to Make Machines" (Eli Whitney); Chapter 6, "Wheat," (Cyrus McCormick); Chapter 12, "Finished Map," (Henry Ford).

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*Machines That Built America can be ordered from Illini Union Bookstore, 715 Wright Street, Champaign, Illinois, 60¢ per copy.

CAPITAL ACCUMULATION: A NEVER ENDING JOB

179 Here we raise the very important question of how we acquired our huge stock of capital.

Certainly, an important understanding for students to develop in their study of capital's role in the economy is that we have been adding to and improving our stock of capital since the earliest settlements in colonial Virginia and New England. A society can add to its stock of capital only if it produces more than it consumes, that is, if it saves.

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The rate of saving from income differs from one society to another and within a society it varies from time to time and group to group. In some countries most of the national income has to be used to feed, clothe and house the people. Another way of saying this is that in these societies consumption is high and saving low. In more productive societies there is less need to consume all that is produced so saving increases. In a nation like the United States there is much less need to consume all that is produced so somewhat larger amounts of national income can be set aside for investment which in turn increases the wealth of the nation. 179

8. In recent years there has been a dramatic trend away from investment 180
in structures meaning commercial and factory buildings which account
for a smaller part of capital investment. Much earlier a similar devel-
opment began to take place in agriculture where less, not more, land
8.1 was required to produce a given output. As a result productive
resources were released from agriculture and moved into the chemical
fertilizer industry, research, development, and agricultural education,
8.2 insecticides, etc. This technical revolution in agriculture reversed
the relative positions of land, structures, and equipment between 1930-65.

8.3 An equally significant shift has occurred in the manufacturing industries. This trend is exerting an influence on the kinds and quantities of resources demanded. Businesses such as the building trade industry are likely to be hurt by this development whereas producers of computers, communication and other equipment which permit us to get greater use out of buildings are likely to benefit. 181

9. Three readings on capital formation are provided here for student reading to consider how an industrialized society acquires capital--in this case the steel industry and Henry Ford "plowing back" earnings in the early development of the Ford Motor Company. The third deals with capital formation in a fishing village. It might be West Africa or any other subsistence economy. 181-184

Capital formation depends on individuals somewhere in the economy who are willing and able to forego consumption in the present and make their savings available to another individual (business firms) who in turn use these savings to improve and increase the economy's stock of capital equipment. Capital formation, then, involves postponment of consumption of some consumer goods in the present unless resources are idle because of a depression or recession. Thus the real cost of capital formation is the sacrifice in the present or the postponment of the enjoyment that one might otherwise have had. But the sacrifice is a temporary one. Indeed, the economic cost of anything is what one has to give up to obtain it which also includes leisure.

Given the new capital good, the economy is now able to produce more consumer non-durable and durable goods and services than it could if consumers had not been willing to forego consumption and make their

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savings available for the production of the new improved capital. And, the increase in output is not for one year but for year after year until the capital good wears out and has to be replaced. With the resulting increased income, people can have both more consumption goods and capital goods.

Certainly, capital formation is a far more complex process than this brief statement suggests. However, the concept is introduced in the materials at this point since it is so important to any consideration of capital equipment as an economic resource in our own and in all other economies. The ever present economic problem of CONSTRAINT should be obvious and here students add another dimension to their understanding of the universality of constraint in economics. Subsequent work with the materials in Courses II and III will develop this concept further.

184 9.1 sale of stocks (preferred and common) carry ownership rights (return: dividend),
sale of bonds (loan) do not carry ownership rights (return: interest),
profits,
borrowing from banks.

185 Henry Ford: profits plowed back for further capital formation

NOTE All successful businessmen at some time use profits-earnings as a source of capital funds to accumulate more capital equipment. Large corporations retain a portion of their earnings for this purpose instead of paying all in dividends to stockholders. As the assets or capital equipment of a firm increase, stockholders' shares increase in value.

9.3 The second group of fishermen accumulated a surplus of fish and then invested it in a capital good (the net) with which they were able to increase their productivity.

Also, this illustration points up another very important principle, namely, the direct method of producing a product is usually the least efficient. The least efficient way to catch a fish is to dive in after it!

So man, including the fishermen in the story, soon learned that the direct method of production can be improved upon by using time-consuming indirect methods--in this case using time which was available only after a surplus of fish had been caught to provide for the family's food during those days that it took to innovate and create a capital good (the net).

186 10. Ideas and insights to look for in student responses to these questions:

10.1 A nation's human resources create capital goods by "mixing" their ideas and labor with the nation's natural resources to create/produce capital goods, i.e., tools, machines, factory buildings, locomotives, etc.

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Our accumulation of capital equipment represents the ideas of our labor force, managerial personnel, natural resources, invested savings, and technology.

The nation's stock of capital equipment at any given time depends on the accumulation of capital goods in the past (replacement with new and improved capital goods goes on continuously), invention, and technology.

Are students able to identify the necessary conditions in this simple illustration of a fishing village and apply them to the creation of capital goods in the economy today?

10.2 To increase its stock of capital equipment, a nation's people must be willing to save--to be willing to defer, postpone present consumption for future consumption. 186

10.3 Our nation improves the quality of its capital equipment by: 186

- investing in research and education;
- finding better ways of getting the most out of the nation's resources;
- our willingness to hold down current consumption to achieve greater productive capacity in the future;
- by improving the quality (education, skill, health) of our nation's human resources so they can use the new capital equipment and processes with maximum efficiency which in turn contributes to rising productivity, increased income, increased saving, increased investment--capital formation;
- our willingness to continue to make capital available and use it productively;
- our willingness to properly reward the owners and users of capital equipment so they are motivated to use it productively and efficiently. When workers use a given amount of capital more efficiently this has the same effect as if the stock of capital were increased.

11. Here we introduce data using selected slides showing the construction of a power project in a labor intensive economy in contrast to the capital intensive American economy. 186

Project the slides without telling students the country or information about each of the scenes shown on the slides. Let them look and make their inferences writing these on page 186-7 in their manual. On completion of their inferences, share with them the information about each of the slides and proceed with 11.1 and 11.2 187

PROJECT SLIDES

Slide No. 674: Men and women workers at Sharavathi Hydroelectric Project in Mysore State climb bamboo scaffolding carrying heavy loads on their heads. Sharavathi is the largest of 28 power projects being constructed in India with assistance from the United States--completion of this project will mean an increase of about 15% to the present installed capacity of power production in India.

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186 Slide No. 676: A view of the mammoth Nagarjunasagar dam under construction in Andhra Pradesh.

Slide No. 677: Most of the work on big projects is still done by hand labor in India. This slide shows laborers carrying heavy stones chained to bamboos at the site of the Sharavathi Dam in Mysore State. Sharavathi Dam is one of the many U. S. assisted irrigation and hydro-electric projects in India.

Slide No. 678: Much of the work on huge multipurpose projects now under construction in India is still done by hand labor. This slide shows a close-up of an Indian laborer carrying a tray full of concrete.

186 Inferences made by students:

- most of the people farm
- many people don't have enough food, shelter, clothing
- the country is trying to industrialize
- there is low productivity in agriculture with few if any surpluses
- people are poor
- there are many illiterate people
- there is a simple technology--people work with simple tools such as walking plows, hand tools
- there is a small stock of capital equipment
- muscle and animal power are the main sources of power
- low standard of living
- many human resources (people) and the country depends on them instead of on machines to get work done
- low productivity per worker, low income, little saving, low investment in capital equipment
- little change
- things are done according to custom and tradition

187 11.1 Dams can be built in different ways--with large amounts of capital equipment, with large amounts of hand labor, or with some combination of capital equipment and human resources. What combination is used will depend on the quantity and quality of available resources.

In this case, India has many human resources relative to capital equipment so it uses those resources that it has the most of--human labor--thereby providing employment and saving its hard currency (rupees) to buy those machines of which it has greatest need in developing a modern industrialized nation. By using human labor it conserves those resources that are in shortest supply, that is, capital equipment.

187 11.2 – unemployment
- problems of housing, feeding, and mounting criticism of government: possibly food riots and demonstrations

- training programs to prepare workers to operate and service the new machines 187
- organize resources to provide and maintain a steady flow of oil, lubricants, power to operate the new machines
- build and maintain transportation and communication facilities to assure a steady flow of raw materials and equipment

These are some of the consequences, or the price a people must be prepared to pay. In this case the social costs are high as they always are when the goal is rapid economic development. Note the many different kinds of constraint that would follow any massive introduction and use of capital equipment to build the dam. Complex social, economic, and political relationships, rooted in the culture, would be altered and adjustments would have to be worked out. Another way of saying this is that resources are not perfect substitutes for one another. Here, capital is not a perfect substitute for men and women dragging stones and carrying trays of mortar up bamboo ramps as shown in the visual data. The real cost of economic development is constant, never-ending social change.

12. Automation: A Blessing or a Threat. 188

Here we consider technological change in our own country. Two views are presented in the short readings, "Automation: Threat and Promise" and "Who's Afraid of Automation." 191-192 194

For your information and preparation, we are including here a provocative discussion of automation by a well known economist, Gardner Ackley, currently on leave from the Department of Economics, University of Michigan, to serve on the President's Council of Economic Advisers. Although the article was written in 1964 when six years of continuing unemployment posed distressing problems and raised many questions about technological unemployment, we include it here believing you will find it most instructive and useful to prepare to discuss the problems and benefits of automation. Students with the aid of readings, and class discussion of the questions raised, should begin to develop some historical perspective on technological change, how it is related to the goals and values of a society, what it requires of a nation's productive resources, and the consequences for the individual and the economy

OPTIONAL:

The film, American Business System: The Nation's Resources might be used for class viewing at this point. It has been prepared by noted economic educators and the understandings developed in these instructional materials are illustrated, in part, in the film. The interrelations of the economy's natural and human resources (labor and managerial personnel) and man-made resources are shown.

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American Business System: The Nation's Resources. 30 min. B&W $5.65. Visual Aids Service, University of Illinois, Champaign, Illinois.

The film presents the nation's wealth in terms of its productive resources. The nation's natural resources (soil, forests, waterways, minerals), the nation's human resources (size in terms of the Total Labor Force and Civilian Labor Force, mobility, education, earning capacity, and productivity), and our stock of capital equipment in machines, tools, factories, sources of energy, transportation and communication are reviewed.

In making your preparation, should you use the film, it is suggested that you reread Basic Understandings, pages xi-xiii, Choice Making and Economic Systems pages v-viii.

2. In lieu of class discussion following the film viewing, students meeting in small groups might prepare a summary statement about the nature and importance of a nation's resources.

   This should be thoughtfully prepared hence the importance of having students share information and ideas before any writing is done. This may take half a period of discussion with the writing done individually as a homework assignment. These, then, become the basis for preparing the final group report.

3. Why not have students think about and reflect on the resources of their state? Local community? Their school? What relationships do they perceive as existing among the resources of the school, local community, state, and the nation's economy?

195 THE PARTS ARE NOT THE WHOLE: THE BUILDING OF AN ECONOMIC SYSTEM

It is the purpose of this final summary section to pose several depth questions which should enable the student to tie together the basic concepts and understandings that have been examined separately under natural, human, and capital resources in these materials. And, even more important, to perceive the interrelationships among the parts which when combined are the economic system. This represents the beginning of understanding ECONOMICS FROM THE VIEWPOINT OF A SYSTEM, wherein each component is interrelated with each other. Underlying all of these concepts and interrelationships is the rationale that economic development is essentially a qualitative not a quantitative process. People and nations

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don't sacrifice and struggle merely for more of the same goods, but for new and improved choices as to economic goods and goals. The reason for this is that there are grave limitations as to the amount of satisfaction people can derive from single goods which they have used in the past. Thus the more dynamic and productive a society is the greater will be the emphasis placed on variety and quality.

The whole purpose or rationale of economic development whether viewed from the standpoint of the individual or the nation is to enlarge economic choice. The new and enlarged choices will depend, in large measure, on the values operative in the individual and society. About all we can be certain about is that these values will change in response to the changing structure and needs of society.

Few people understand the complexity of a modern economic system. For example, the Soviet Economy is now producing in excess of twenty million different goods and services each of which must be related to all other goods, such as the quantity of steel must be consistent with the amount of coal and other raw materials used in its production whether it is supplied by a private enterprise system or central planning. The same is true not only of final goods but of human and natural resources. It is estimated that in the case of the Soviet Union the economic interrelationships among industrial goods now exceed the figure four quadrillion.

In view of such complexity which escalates when we begin to introduce the non-economic aspects or features of a system, we are forced to single out very basic concepts and forces operative in the economic system rather than to attempt to understand it as an economic or cultural whole.

The concepts that have been introduced and examined in these materials should provide a foundation for understanding the economic side of our lives as an integral whole and not as separate and seemingly unrelated human activities--in other words, from the standpoint of a SYSTEM.

The materials have emphasized economic activity, whether in the African fishing village or in industrialized Detroit, as having certain things in common despite the enormous difference in value systems. First and foremost is ECONOMIC CONSTRAINT. Hard choices are necessary in Detroit as well as in Africa.

Important, too, is the high degree of interdependence among the human and other resources used in the production of both fish and cars. It's fish that determine the nets and the boats and the location of the population along the river banks. Similarly, it's the cars that have helped shape urbanized and industrialized America with its factories, technology, highways, filling stations, drive-in restaurants and movies, air pollution, and sprawling suburbia. If the car has done anything it has enlarged choices particularly with respect to where one can work.

Implicit, then, in the choice is the means used to materialize or supply that choice. The more sophisticated the want the greater will be the complexity and number of interrelationships among the means employed to satisfy that want.

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When we study other cultural areas including Western Europe, Sub-Saharan Africa, the Soviet Union, India and Japan in Courses II and III, students should be better able to understand the economic side of life in these different cultural areas in time and place.

The immediate economic constraints such as the kind and quality of land and other natural resources, the skills and technology of the people, their cultural values as to what is worth and not worth doing will help us understand why most of the economic activity is directed toward the supplying of fish instead of cars.

Whether the economy is complex involving the provisioning of millions of products, or simple as in the case of the fishing village, the basic interrelationships and constraints are present.

116 Figure 1.16, page 116, is a pyramid chart that helps to explain the basic interrelationships which make up our economic system and which may provide insights as to how the American economic system changes over time. In subsequent materials on other cultural areas students might try to visualize a pyramid which would more actually depict the structure and operation of the economy of a particular culture. At the base, the major natural resources may be very different from those in our own American economy. Similarly, differences may obtain among the human resources, the final products people demand, and in the size of the Gross National Product produced.

At the base are shown some of the basic resources from which producer and consumer goods are made. Directly above on the pyramid are the human resources classified as population, labor force, and households. The principal function of the human resources, as has been emphasized in the previous section of these materials, is to combine these natural resources to make the final products demanded by the society. Here we are concerned with the roles of workers, entrepreneurs, financiers, and even families. Two of the final products which account for a large part of our total economic activity are shown directly above the human resources. When we combine the millions of final goods in different shapes, styles, sizes, models, colors, and location we have a total value of the economic activity of the society. Economists call this the Gross National Product which is the money value of all the final goods and services produced in a given year. It has been estimated that the GNP per worker will reach the value of $15,500 by the Year 2000. On the basis of the readings and the data provided in these instructional materials, the student should try to visualize the composition of this pyramid, that is, the natural resources, human resources, and final products that will comprise this total GNP of $15,500 per worker in the Year 2000.

Since this is a finalizing summary for the study of the unit, Economics: Choice Making, it is recommended that students make very thoughtful preparation of the questions that are provided and that time be provided for discussion of each of the ten questions. This should properly take several days with preparation of two or three questions assigned for each day's preparation. There is much to be gained from having students prepare their written answer individually in class prior to class discussion of same. A

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full page is provided for each question, so students have ample space to develop extended answers with evidence and appropriate examples to support their position. Understandings students should begin to bring to these summary questions are suggested here. In the discussion, you will have opportunity to help students *sharpen* and *deepen* their understanding of the *interrelationships* involved.

Question 13.1: This question should enable the teacher to test the student's understanding of economic change. What is involved in arriving at an output of $15,500 of final products by the Year 2000? What happens to the worker (the human resources); to the instruments of production (capital); to the natural resources required to produce this greatly enlarged output? In understanding these changes, we can answer the question whether people will want merely more of the same goods that are produced today *or* will they want new goods and services as well as goals? 195

The cost that the society must pay to produce this enlarged output is to make fundamental changes in both its human resources and the use of its natural resources. People will need to be prepared to do different things and do them differently. An enlarged output entails a more productive people. This means a better educated and motivated labor force using new and improved technology (capital goods) which in turn will make different demands upon the nation's non-human resources. Nor is this the end of the story. A better educated and motivated people using more sophisticated capital will not be satisfied, nor should they be, with the production of more of the same goods.

Question 13.2: Here we are concerned with what *specific* changes will take place as a consequence of a better educated people using more sophisticated and complex means of production that are likely to take place. For example, education itself. The demand for educational facilities is likely to increase at a faster rate than income during this period to the Year 2000. In contrast, the relative demand for food, basic wearing apparel, perhaps even housing may increase less rapidly than income during the period to the Year 2000. The result will be basic structural changes not only in the kind of things households will demand but also in the resources and the means of production used to satisfy them. 196

Questions 13.3 & 13.4: Greatly enlarged income in the Year 2000 implies a more productive work force. Capital is a principal factor in determining the productivity of the labor force. We can expect that not only will more capital be used but the kind and quality of the capital itself will undergo constant change throughout this period to the Year 2000. The particular changes will be largely determined by the goods and services people want. It's in the choice of final product that the means (capital) is determined. 197-198

BASIC UNDERSTANDING: ECONOMIC SYSTEMS ARE MAN-MADE AND DYNAMIC UNDERGOING CHANGE AS EXISTING CONDITIONS IN A SOCIETY CHANGE.

199, 200, 201 Questions 13. 5 & 13. 6 & 13. 7: The important point here is that we will not be using more of the same kind of labor but that the labor force will undergo a qualitative change in the process of arriving at this greatly enlarged income in Year 2000. And, in turn, these changes in the workers and their families will be reflected in the kinds of goods and services they will want as a result of this greatly enlarged income. Also, the qualitative change in the labor force making it more productive will permit a later entry and earlier exit from the labor force as well as a shorter work week without a loss in production.

202 Question 13. 8: Here we attempt to test the students' understanding of the relationship between the labor force and the household in determining what goods and services will be provided in the future. As the worker is better educated and paid this will be reflected in fundamental material and service wants in his own household.

203 Question 13. 9: Concerns the economic impact of unequal rates of population change. For example, if fertility rates are high at the present--there is a baby boom--this will be reflected in the Year 2000 not for child needs but for Americans forty years of age--for cars, three dimension television, new and improved housing, recreational facilities. Unlike other economic phenomena, we must be prepared to consider a lag (a delayed impact) up to seventy years when dealing with population.

204 Question 13. 10 a, b, c: Stresses the close relationship between natural resources and final products. While it is true that in our choice of final products the means is largely determined, it is also true that the availability or scarcity of natural resources help determine what final products people will demand. It is no accident that fish loom large in the life of the African fishing village and that cars are considered essential by Americans. It's the difference between wishing and wanting. In economics, a peoples' choice is obviously constrained by the availability of the materials to satisfy that choice. A change in resource availabilities may reflect itself in a shift to different wants which in turn will make different demands on the natural and human resources of the society.

* * * * * *

Filmstrip: The Next Twenty Years, The New York Times, May 1966, might be used after students have completed their development and class discussion of the preceding ten questions. Scientists, Demographers and Economists present a preview of life in 1980.

> Two things are characteristic of our age. . . . The conscious appreciation of natural beauty, and the rapidity with which natural beauty is being destroyed. --G. M. Trevelyan, 1959.

> The most valuable thing we can transmit to the next generation is technological knowhow.

IV

WHAT IS CAPITAL EQUIPMENT?

locomotives
oil derricks
dynamos
state capitol buildings
warehouses
air terminals
telephone exchange
truck terminals
office buildings
research laboratories
post offices
freight cars
oil tankers

stores
tractors
combines
docks
colleges
highways
power plant
factories
power lines
hospitals
pipe lines
tools
barges

banks
elementary schools
bulldozers
shovels
city hall
cranes
fire trucks
high schools
steel mills
plows

1. All of the things listed in the three columns above are similar having certain things in common. Study the entries and state what these things have in common.

Statement 1.1 ____

____

Statement 1.2 ____

____

Statement 1.3 ____

____

2. Your teacher will help you check your statements. Write your revised statements below.

3. What is the relationship between capital goods and the other factors of production, that is, land and labor?

4. Now you should be able to explain what we mean by capital equipment. Write your explanation here.

5. Turn to the lists of capital equipment in No. 1. Have you wondered why we Americans, and many other people, want capital equipment? Think about this question and then write your "hunches" as tentative hypotheses--If, capital equipment, Then. . . . .

   Hypothesis 1:

   Hypothesis 2:

   Hypothesis 3:

Enter here revisions you wish to make following class discussion of hypotheses suggested by your classmates.

6. Now you'll check your hypotheses using several different sets of data on the American economy in Figures

   In the space provided for questions on each set of data, write your statements that accurately interpret the data.

   6.1 Figure 1.22--CAPITAL INVESTED PER EMPLOYEE IN MANUFACTURING

   What, according to these data, is the range of capital invested per employee in all manufacturing enterprises, that is, what industry has the largest amount of capital invested per employee? What manufacturing enterprise has the lowest capital invested per employee?

   ____

   ____

   ____

   What is the average capital invested per employee in all manufacturing enterprises shown on Figure 1.22? __________

   What is the importance of this capital invested per employee for:

   The workers in manufacturing:

   ____

   ____

   ____

   The communities in which they live:

   ____

   ____

   ____

   The economy:

   ____

   ____

   ____

6.2 Figure 1.23--ASSETS PER FARM WORKER.

What, according to these data, happened to assets per farm worker in the United States in the period, 1940-64?

What happened to the nation's stock of capital equipment used in agriculture in the period, 1940-64?

What is the importance of this capital investment in equipment for:

farmers:

employment in agriculture:

the economy:

MONEY IS NOT CAPITAL

6.3 Given the data on Figures 1.22 and 1.23 and your interpretation of these data, what generalizations can you make about capital equipment in manufacturing and agriculture in the American economy? Try to formulate accurate, clearly worded statements.

6.4 Figure 1.24 --GROWTH IN OUTPUT PER WORKER

What do these data tell you about the output per worker for 1960 as compared with 1880?

What do these data tell you about the projected output per worker for the Year 2000 as compared with 1960?

What is the significance of the projected output for the Year 2000 for:

Members of the labor force:

The economy:

6.5 Figure 1.25--THE AVERAGE WORK WEEK

What happened to the work week in the period, 1850-1960?

How long did it take to get a 60 hour work week?________; A 50 hour work week?_______; A 40 hour work week?________.

What was happening to the nation's population during the period, 1850-1960? (See Table 1.8, page 119)

How do you explain the reduction in the work week when actually much more was demanded of the economy to feed, house, and clothe the nation's growing population?

What is the importance of these reductions in the work week for:

Members of the labor force:

The nation:

6.6 Figure 1.26 --PAY FOR ONE FACTORY HOUR OF WORK BUYS

How do you account for the increased amounts of food that a factory worker was able to buy for each hour of work in 1931, 1941, and 1961?

What is the importance for:

Workers:

The Economy:

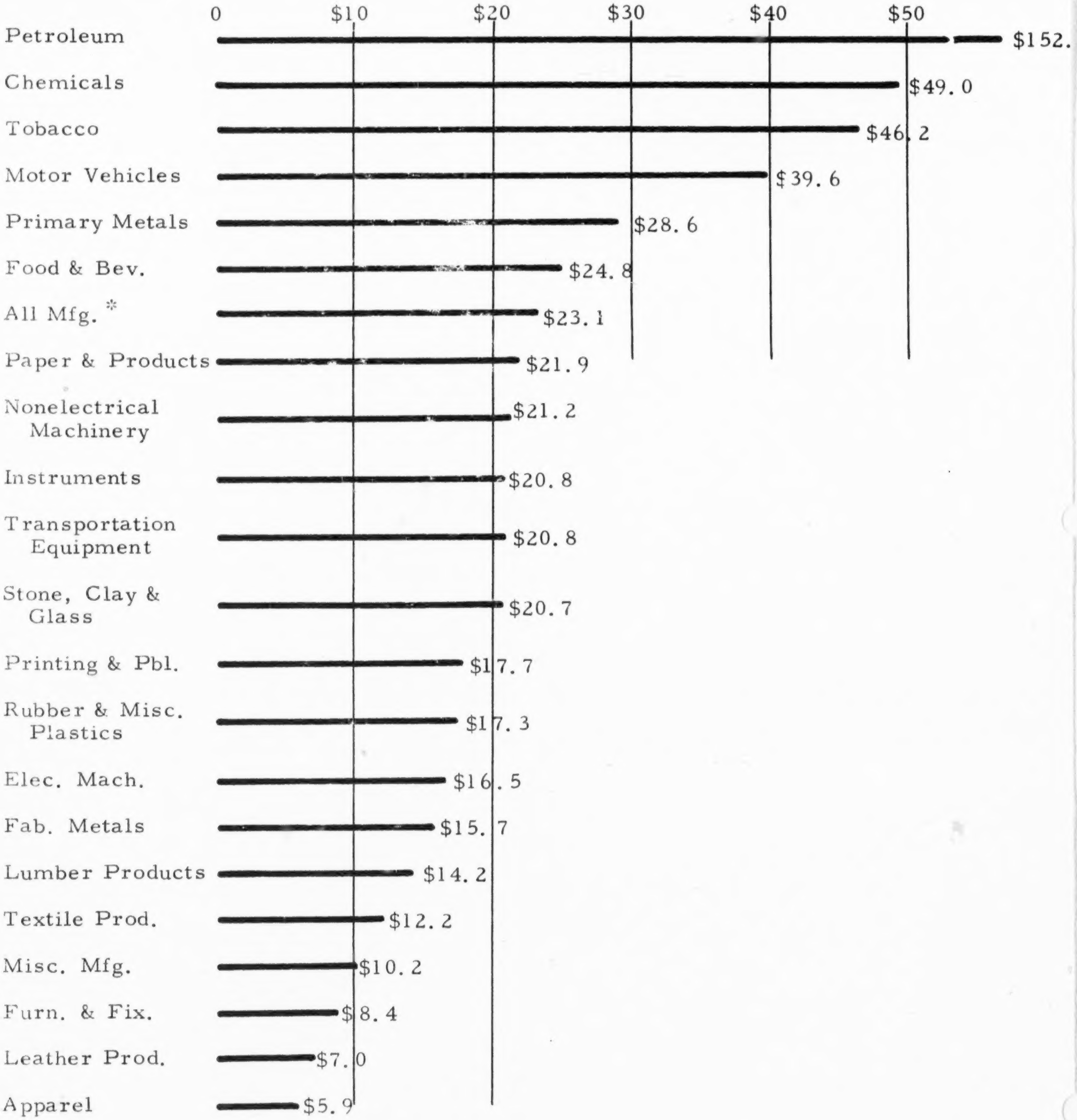
MONEY IS NOT CAPITAL

7. Reexamine the entries you have made to questions in which you have been analyzing important data about the American economy. If you have any unanswered questions, be sure to check them out and correct the statements you have written for all the questions on the data. Now you should be ready to discuss this statement with many important reasons. Try to limit your essay to 200 words.

THE AMERICAN PEOPLE WANT MORE AND BETTER CAPITAL EQUIPMENT BECAUSE--

FIGURE 1.22
CAPITAL INVESTED PER PRODUCTION WORKER IN MANUFACTURING

Thousands of Dollars
1964



Source: National Industrial Conference Board, Inc.
Road Maps of Industry No. 1579

Tr41.1

FIGURE 1.23

ASSETS PER FARM WORKER

YEAR	TOTAL
1940	$ 3,413
1945	6,625
1950	9,448
1954	13,162
1959	20,168
1960	21,079
1961	22,043
1962	23,478
1963	25,239
1964	27,005

U. S. Department of Agriculture, 1964

Production Assets Used in Agriculture
1940-1964 Current Price

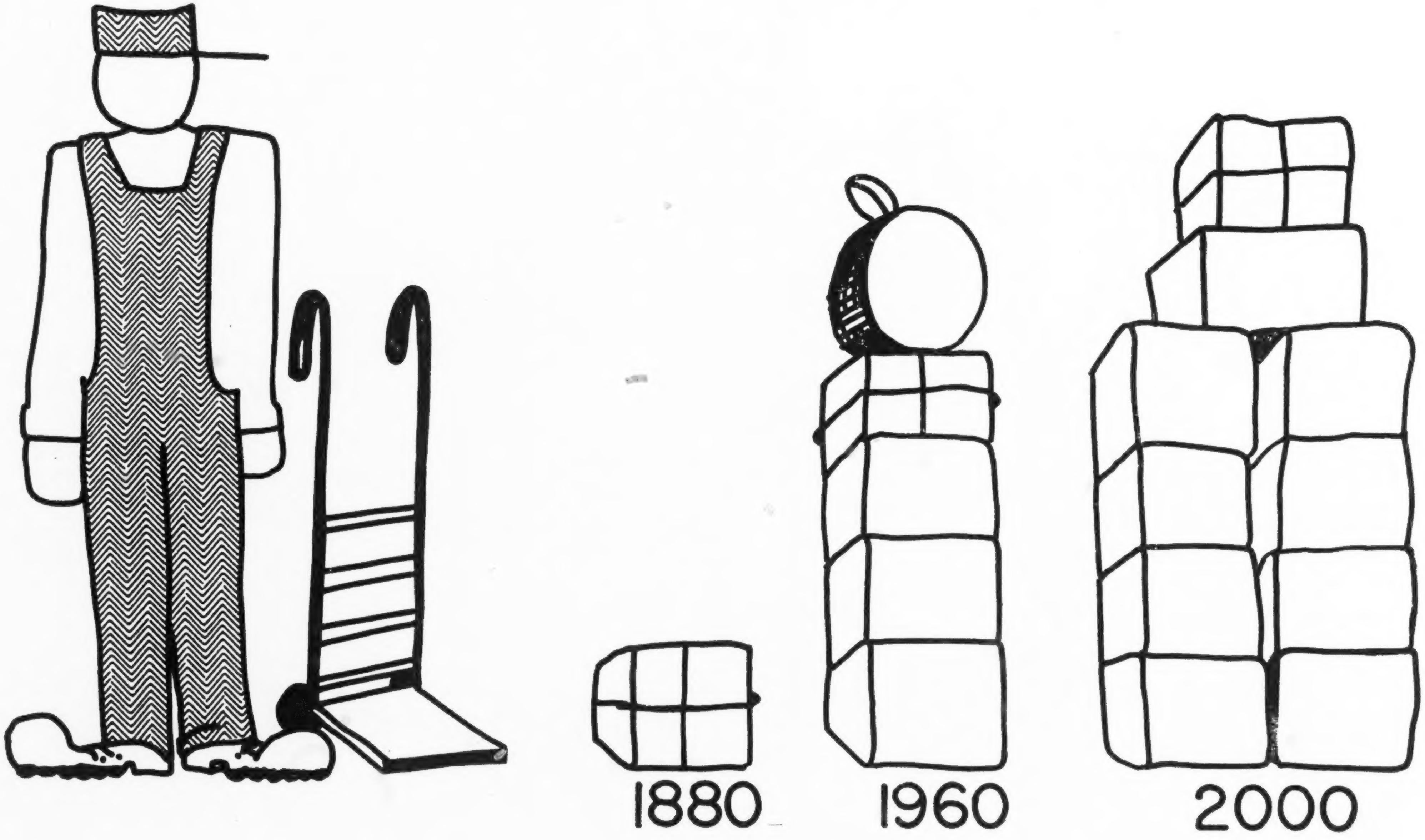
Year	Farm Real Estate	Livestock	Machinery and Other Motor Vehicles	Other	Total
	Billion Dollars	Billion Dollars	Billion Dollars	Billion Dollars	Billion Dollars
1940	28.1	5.1	2.5	2.3	38.0
1945	45.6	9.0	5.6	7.5	67.7
1950	64.6	12.4	10.4	6.7	94.1
1954	82.9	11.5	14.2	7.0	115.6
1959	110.3	17.3	16.0	7.6	151.2
1960	116.0	15.2	16.5	7.1	154.8
1961	117.5	15.5	15.9	6.6	155.5
1962	123.5	16.4	16.0	6.6	162.5
1963	128.8	17.2	16.4	6.7	169.1
1964	136.4	15.7	16.8	7.1	176.0

U. S. Department of Agriculture, 1964.

Tr41.1
SSCSC '65

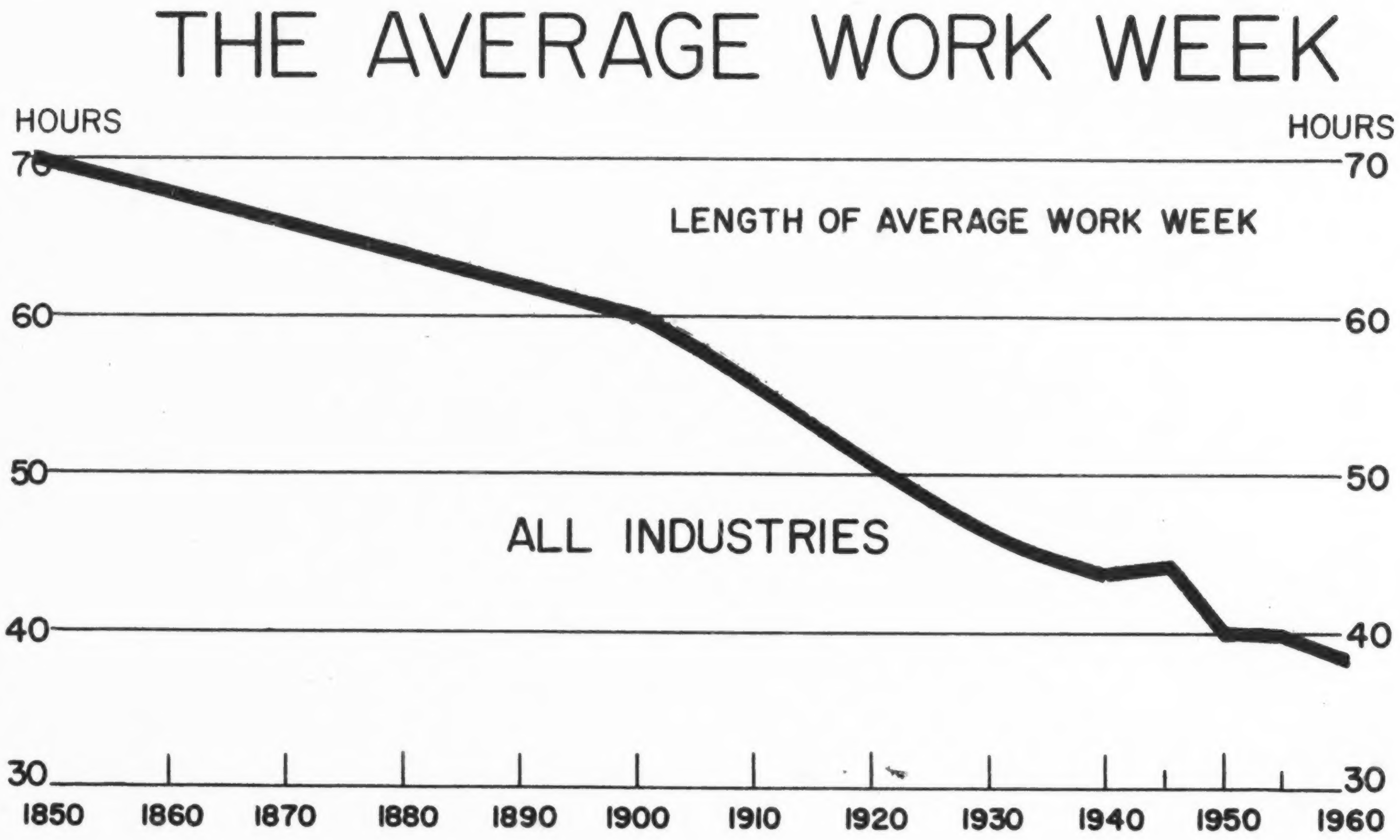
FIGURE 1.24

GROWTH IN OUTPUT PER WORKER


1880
1960
2000

Source: Resources in America's Future SSCSC '67

FIGURE 1.25



SOURCE: NATIONAL INDUSTRIAL CONFERENCE BOARD, INC., NO. 1404, NOV. 23, 1962

SSCSC '65
C—1,5

Tr 41.2

FIGURE 1.26

PAY FOR ONE FACTORY HOUR OF WORK BUYS

FOOD	YEAR	AMOUNT
Round Steak	1961	2.2 pounds
Round Steak	1941	1.9 pounds
Round Steak	1931	1.4 pounds
	or	
Bacon	1961	3.3 pounds
Bacon	1941	2.1 pounds
Bacon	1931	1.4 pounds
	or	
Milk	1961	17.8 pints
Milk	1941	10.6 pints
Milk	1931	8.0 pints
	or	
Oranges	1961	3 dozen
Oranges	1941	1.3 dozen
Oranges	1931	1.5 dozen

U. S. Department of Agriculture, 1962.

Tr. 41.2
SSCSC '65

CAPITAL ACCUMULATION: A NEVER ENDING JOB

We have seen in the preceding section that capital is not money but things--dissimilar things--such as tractors, combines, locomotives, factory buildings, power plants, hospitals, school buildings, research laboratories, tools and machines and all the other capital equipment used to produce goods and services. Perhaps the simplest way to define what we mean by capital is goods to make other goods. Although capital is not money, money is a convenient way of adding up the worth of the hundreds of thousands of qualitatively different things which we call capital. An estimate given in 1964 for our nation's stock of non-farm capital equipment was $725 billion.

How do you think we got this stock of capital? Much of it was saved in the past in order to provide those of us living today greatly enlarged choices and goals. But this is only part of the story. Much of our capital must come from current production. In the reading, "A Company Generates Its Capital Funds," the Ford Motor Company "plowed back" parts of its earnings or profits as capital. In the African fishing village part of the catch was sold to provide new nets and fishing equipment.

We should try to view capital not as a stock or a "fixed tool box" which will forever supply a population with its economic needs. Instead, capital must be viewed as a flow--an expanding tool chest that must keep abreast of a growing population and rapidly expanding expectations. We have learned that people with rising incomes want new or improved goods and services, not merely more of the same.

The mathematics of this is simple. There are more people living today in the world than have lived and died since the beginning of time. In the United States since 1776, one hundred and seventy-six million people have lived and died. Yet, today, there are over two hundred million people living in our country. Another way of saying this is that there are twenty-four million more people living today than have ever lived in the entire history of our country.

Suppose that every single one of the 176 million Americans who have lived and died during the past 191 years did his part of postponing consumption (saving) so that our capital stock could be enlarged. Would this be adequate for a population of 200 million people living at the same time in 1967? The answer is NO! Not only will the population continue to grow by the second--one child every eight and a half seconds--but the expectations of Americans for improved goods and services will grow even faster. To achieve these wants, Americans have no choice but to continue to enlarge and improve their stock of capital. Capital while dependent, in part, on the sacrifices of the past must also flow from current sacrifices and output. It is, indeed, a never ending job.

In the preceding sections on consumer goods, population, and the labor force, we observed that not only did growth take place in the quantity of consumer goods and in the number of people and laborers, but important qualitative changes took place, also. The economists often refer to these as the changing composition of the population, the labor force, and consumption goods. The same is true of capital goods. Capital growth means more than merely increasing the number of tractors, locomotives, and factories. It involves important changes in the kind and the quantities of capital equipment.

8.

TABLE 1.15

STRUCTURES AND DURABLE EQUIPMENT

(Billions of Dollars)

Year	Structures	Durable Equipment	Total
1960	18.1	30.3	48.4
1961	18.4	38.6	47.0
1962	19.2	32.5	51.7
1963	19.7	34.6	54.3
1964	21.1	39.4	60.5
1965	24.3	45.5	69.8

Source: Economic Report of the President, January 1966.

8.1 Examine the data on Table 1.15--Structure and Capital Equipment. What do these data tell you about what has been happening in recent years to the composition of investment in structures and capital equipment? What reasons can you give?

8.2 Which industries do you think will be most affected by this trend in the composition of investment?

8.3 What impact will this change in the composition of investment have on the pattern of employment? That is, what skills and occupations are likely to be helped or hurt?

____

____

____

____

____

9. Turn now to the three readings that follow: "Capital Equipment in the Steel Industry," "A Company Generates Its Capital Funds" and "Where the Fishing Village Gets Its Capital Funds," for information on how a highly industrialized society and a fishing village get and increase their stock of capital equipment.

CAPITAL EQUIPMENT IN THE STEEL INDUSTRY

An important development in the manufacture of steel in recent years has been the oxygen steelmaking processes, which produce heats of steel faster than the open hearth method. Late in 1965, a new three furnace Basic Oxygen Process shop started operation in the Chicago area. This unit can produce substantially more tonnage than the 17 open hearth furnaces that it replaces. Approximately 8 million tons of steel were made by such furnaces in 1963, compared with a little less than 5. 6 million tons the previous year.

All of this requires massive equipment and tremendous sums of money. Capital equipment in the steel, petroleum, aluminum, chemical, automotive, farm machinery, and power industries requires large investment in plants, tools, and machines.

The investment per worker in manufacturing industries in the United States today is approximately $20, 000. Since this is the average per worker investment in all manufacturing enterprises, there are some such as the petroleum, chemical and aircraft where the investment per worker is much larger.

Let's take a look at the steel industry, a heavy industry that has played and continues to play an important part in the nation's economic growth and one on which many other industries including the automobile, construction and appliance industries depend. The United States has the largest steel industry in the world, producing about 30 percent of all the steel made in the world.

Big equipment and investment are required in the production of steel. Eighty-four companies are producers of both steel ingots and finished steel. The remaining companies are producers of pig iron or carry out only the different steel finishing operations.

CAPITAL ACCUMULATION: A NEVER ENDING JOB

Capital Equipment in the Steel Industry

Over a million men and women own shares of stock in the nation's steel industry. Altogether nearly 12.5 million Americans are investors in America's corporate enterprises that make steel. Another 100 million are indirect investors as owners of insurance policies, savings bank accounts, shares in mutual funds, or by participating in pension plans, since part of these funds are invested in stock in the steel companies. We call this invested money "capital." When a steel company spends the money for a new mill or laboratory it is translating the money into capital equipment or fixed capital assets. These assets are owned by the stockholders who expect a return on their invested money.

In the decade beginning in 1950, steel making companies expanded their capacity nearly 50%--to nearly 150 million tons annually. During the same period the steel industry's total assets rose from $7.0 billion to $15.7 billion.

In the early years of our nation's industrial development, factories were often built and equipped by one or two individuals. In time, machines became larger, more complicated, and costly. Money (capital) to build the new mills and factory buildings and to buy the new tools and machines (capital equipment) had to be sought from many sources. One of the important sources is the savings of the individual investor. The corporation gains permanent use of the capital funds it secures by offering stock for sale. But every stockholder has a right to sell his share to another person. Owning a share of stock is like owning your bicycle or transistor. Its yours until you sell or dispose of it. But unlike your bicycle, stock in a corporation makes its owner an interested part-owner of the company. It may yield in the form of dividends and an increase in value with the years. By buying stock with some of their savings, millions of Americans have become part owners and participating investors in the production of tools, machines and other capital equipment to increase our capacity to produce more steel.

Another source of capital is profit, a part of which may be retained and reinvested in the company. In the steel industry, about 50 percent of the profit earned since 1950 has been paid out as dividends to the stockholders of the different companies in the steel industry leaving the other 50 percent available for modernizing and adding to the industry's stock of capital equipment.

A third source of new capital funds is borrowing by issuing bonds. A corporate bond is a written promise to repay a specified sum of money at a fixed date in the future. Interest is paid at a fixed rate on specified dates usually every six months.

Money outlays required for new capital equipment grow larger year by year to keep pace with technological development. In 1950-59, the steel industry required $4.3 billion of new capital funds, including long term borrowing. Part of this had to be used to replace worn out furnaces, mills and other capital equipment used in the making of steel. The remainder was used to finance new improved steel-making capital equipment.

All businesses produce goods and services for which there is demand in our own and in other countries. To meet the demand of consumers for more and better goods and services requires a continuing flow of large sums of investment capital. The steel industry is one of many American industries where money is at work in the form of capital equipment.

WHERE THE FISHING VILLAGE GETS ITS CAPITAL

In contrast to economic activity in a highly industrial society, here we have a scription of the economic life of a fishing village. In common with the industrial- d society described in the readings on the steel and automobile industries, we find pital, motivation, and education playing important roles in the economic life of fishing village. The men in this particular village are fishermen who stand in water day after day catching fish with their hands. By working 14 hours each y they and the other men of the village are able to catch just enough fish to feed mselves and their families. In time they become more skilled and now catch same amount of fish in 12 hours a day. Some of the fishermen now work 12 urs and rest the other two hours. The others continue to work 14 hours and catch re fish than they need to feed themselves and their families. They take their ily surplus catch of fish and put these aside. Now they can stop fishing for several ys and spend their time making nets. Using the net he has produced, each of the hermen finds to his surprise that he catches all the fish he and his family needs 6 hours. How might these fishermen use the extra hours? What difference would make for them? For their village?

(continued)

Can you list the different ways in which the steel companies get and increase their stock of capital equipment?

9.2 How did Henry Ford get and increase his stock of capital equipment to build Model T cars?

9.3 Contrast and compare the role of capital in the steel and automobile industries with the fishing village. That is, (a) sources of capital, (b) amount and kind of capital, and (c) the impact of capital in enlarging economic choices for the firms and for the village or for industry and for the fishing village.

10. What can you say now in answer to these questions?

    10.1 How does the nation get capital equipment to produce goods and services?

    10.2 How does our country increase its stock of capital equipment?

    10.3 How does our country improve the quality of its stock of capital equipment?

11. Your teacher will show you several slides. Look at these scenes carefully and make as many inferences as you can about the country where this structure (a dam) is being built. Write your inferences below.

(continue on next page)

CAPITAL ACCUMULATION: A NEVER ENDING JOB

11.1 Why is this structure being built in this way?

11.2 Now, suppose electrically operated cranes and other power driven construction tools and machines were used to build the dam. What would happen? Why?

12. Two views on automation are presented in "Automation: Threat and Promise" and "Who's Afraid of Automation." Read the statements and then prepare your answers to these questions for class discussion.

12.1 What do the authors consider to be the:

Bright Side of Automation	Dark Side of Automation

12.2 According to the authors, in what industries are workers being displaced by automated machines? What specific jobs are involved?

Industries	Jobs

12.3 What relation do you see between automation and the occupational distribution projections for the labor force in 1975 as shown on Table 1.14, page 160?

____

____

____

____

____

12.4 What are the implications of these trends for you and all other teenagers in the U.S.A. today? Note here the points that you will develop in class discussion.

APITAL ACCUMULATION: A NEVER ENDING JOB

12.5 What does this cartoon mean to you? Submit in writing, here, your program of action or recommendations for solving the modern problem that is represented in the cartoon?

THE PARTS ARE NOT THE WHOLE: THE BUILDING OF AN ECONOMIC SYSTEM

Economists estimate that each American worker will be producing $15,500 of final products in the Year 2000.

13.1 What will this $15,500 of goods consist of--more of the same goods produced in 1960 or will there be important changes in the kinds and quantities of goods and services produced and supplied to the American peoples?

13.2 If your answer to question one is the latter, what important changes do you anticipate will take place in the kind and quantity of goods supplied and the natural resources used to produce them?

13.3 What role will capital play in the production of this vastly enlarged GNP in the Year 2000?

13.4 Will the enlarged GNP result from the use of more of the same capital, that is, increased amounts of capital or will new and improved capital be forth coming?

13. 5 What role will human resources play in the production of this vastly enlarged GNP in the Year 2000?

13.6 Will this enlarged GNP result from the use of more of the same kind of labor, that is, a larger labor force or will the labor force be better educated, motivated, and equipped with new and improved capital?

13.7 In the production of this greatly enlarged GNP in the Year 2000, will the American worker put in the same number of hours per week, enter the labor force at the same age, and leave the labor force at the same age and under the same conditions as in 1960?

13.8 What role will be played by households in the determination of the composition of the Gross National Product in the Year 2000?

13.9 What effect will present population trends have on the economy in the Year 2000?

13.10 Suppose in the Year 2000 some of the basic natural resources at the base of the triangle have become scarce or because of discovery relatively more abundant. What impact might this have on:

(a) the human resources

(b) the final products

(c) the Gross National Product per worker possible in the future